# Shahada Taluka Educational Society & Co-Operative Educational Society Ltd. Institute of Management Research and Development

#### Shahada Dist- Nandurbar Academic Year 2022-23 TYBCA Sem-V Field Work

No.	Name Of Student	Field Report Name	Guide Name
1	Bafana Arpita Manoj	A Study on user of digital Signature	Asst.Prof. Anil R. Patil
2	Bagul Vinod Devidas	User Satisfaction of Online Job Portal	Asst.Prof. Vijay K. Gaikwao
3	Bedse Rohit Bapu	Comparative Study between Amazon & Flipkart	Asst.Prof. Sonali M Patil
4	Chaudhari Kunal Kanhayalal	A study of e-audio book system	Asst.Prof. Anil R. Patil
5	Chitte Pawan Rajendra	Online Bus Ticket E-Reservation System	Asst.Prof. Vijay K. Gaikwad
6	Choudhary Jignesh Krishna	Women helpline Scheme & its Impact on Women's	Asst.Prof. Sonali M Patil
7	Devare Roshani Prakash	To Study Online Loan Application & Verification System	Asst.Prof. Anil R. Patil
8	Dhole Rinku Shamrao	Customer Satisfaction Analysis Facebook & Instagram	Asst.Prof. Vijay K. Gaikwad
10	Girase Harshal Subhash	To study the Implementation of Digitalization of Z.P. School in rural	Asst.Prof. Anil R. Patil
11	Girase Nilesh Mangalsing	A study on use of Policybazaar web portal	Asst.Prof. Vijay K. Gaikwad
12	Hajare Shruti Pravin	PharmEasy Healthcare App	Asst.Prof. Sonali M Patil
13	Jadhav Avinash Ramesh A study on uses of online services of IRCTC		Asst.Prof. Anil R. Patil
14	Jadhav Bhavesh Ashok	A Study on Uses of Mahavitaran App.	Asst.Prof. Vijay K. Gaikwad
15	Jadhav Chetan Pravin	Students Opinion On E-Government Scholarship	Asst.Prof. Sonali M Patil
16	Jagtap Rakesh Subhash A Study on uses of GST Web Portal		Asst.Prof. Anil R. Patil
7	Jain Yamini Champalal	A Study And Analysis on CCTV Camera System	Asst.Prof. Vijay K. Gaikwad
8	Javheri Chetan Yogeshsing	To Study on e-tender Services	Asst.Prof. Sonali M Patil
9		To Study on Uses or ERP software in business accounting	Asst.Prof. Anil R. Patil

No.	Name Of Student	Field Report Name	Guide Name
20	Koli Dhananjay Hiralal	A Customer preference Towards OTT Platform Service/System	Asst.Prof. Vijay K. Gaikwad
21	Char Hemant Daisch		Asst.Prof. Sonali M Patil
22	Mahale Dnyaneshwar Dadabhai	Pradhan Mantri Gramin Digital Sakashtra	Asst.Prof. Anil R. Patil
23	Manyar Aadil Sk Salim	A Study On Use s Of Online Services Of MSRTC	Asst.Prof. Vijay K. Gaikwad
24	More Harshal Rajendra	Problem Faced By The Rural Area Customers about ATM Banking System	Asst.Prof. Sonali M Patil
25	Nizare Haresh Vishnu	A Study of Customer Satisfaction Telecom Service	Asst.Prof. Anil R. Patil
26	Padavi Terasing Kusana	A Study On Use s Of Online Services Of MSRTC	Asst.Prof. Vijay K. Gaikwad
27	Patil Alesh Madan	Analysis of E-Suvidha in Rural Area	Asst.Prof. Sonali M Patil
28	Patil Bhushan Dnyaneshwar	To Study Of Digital Banner App.	Asst.Prof. Anil R. Patil
29	Patil Harshal Rajendra	GM Fitness App	Asst.Prof. Vijay K. Gaikwad
30	Patil Jaydip Anand	To Study User Adoption & Challenges on Digilocker	Asst.Prof. Sonali M Patil
31	Patil Jayesh Chunilal	A Study on YONO You Only Need One- the Digital Banking App Of SBI	Asst.Prof. Anil R. Patil
32	Patil Nayana Dipak	A study on benefits of online Sarathi Parivahan Services	Asst.Prof. Vijay K. Gaikwad
33		Analytical study on uses of CoWin Web Portal	Asst.Prof. Sonali M Patil
34		To Analysis & Get User Satisfaction About Google MAP Service	Asst.Prof. Anil R. Patil
35	Patil Vishal Suresh	A study on Online PAN Services	Asst.Prof. Vijay K. Gaikwad
34	Patil Yash Santosh	Case Study on Unified Payment Interface (UPI)	Asst.Prof. Sonali M Patil
3	Pawar Krushnakant Suresharao	A Study on Uses of Income Tax returns e-Filing	Asst.Prof. Anil R. Patil
3	Rajendrasinh	A Study on E-services of MSME (Udyam)	Asst.Prof. Vijay K. Gaikwad
3		A Study on Usibility of Google Meet for E-Online Meeting	Asst.Prof. Sonali M Patil
4		A Study On Online Services Of Pradhan Mantri Kisan Samman Nidhi	Asst.Prof. Anil R. Patil
4		To Study The Impact of E-Peek pahani App for Farmers	Asst.Prof. Vijay K. Gaikwad
4	Tamkhane Harshal Atmaram	A study on uses of online yoga and - fitness Zones	Asst.Prof. Sonali M Patil
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# Shahada Taluka Educational Society & Co-Operative Educational Society Ltd. Institute of Management Research and Development

#### Shahada Dist- Nandurbar Academic Year 2022-23

TYBCA- VI Project Report - 2022- 23

No	Student Name	Guide Name	Project Name
1	Bafana Arpita Manoj	Asst. Prof. Gayatri P. Patil	Warehouse management system
2	Bedse Rohit Bapu	Asst. Prof. Sonali M. Patil	Loan Management System
3	Chaudhari Kunal Kanhayalal	Asst. Prof. Tahir Mansuri	Judging Management System
4	Chitte Pawan Rajendra	Asst. Prof. Gayatri P. Patil	Simple Real State Portal System
5	Choudhary Jignesh Krishna	Asst. Prof. Anil R. Patil	Ware House Management System
6	Devare Roshani Prakash	Asst. Prof. Gayatri P. Patil	Online Project Time Management System
7	Dhole Rinku Shamrao	Asst. Prof. Anil R. Patil	Simple Social Network Site Like Instagram
8	Girase Harshal Subhash	Asst. Prof. Gayatri P. Patil	Online Messaging System
9	Girase Nilesh Mangalsing	Asst. Prof. Tahir Mansuri	Train Schedule App
10	Hajare Shruti Pravin	Asst. Prof. Gayatri P. Patil	Online Diagnosis Lab Management App
11	Jadhav Avinash Ramesh	Asst. Prof. Gayatri P. Patil	Pharmacy Management System
12	Jadhav Bhavesh Ashok	Asst. Prof. Sonali M. Patil	Online Food Ordering System
13	Jadhav Chetan Pravin	Asst. Prof. Tahir Mansuri	Library Management System with QR Code
14	Jagtap Rakesh Subhash	Asst. Prof. Sonali M. Patil	Wither Forecast Management
15	Jain Yamini Champalal	Asst. Prof. Anil R. Patil	Pharmacy Sales and Inventory System
16	Javheri Chetan Yogeshsing	Asst. Prof. Tahir Mansuri	Secure ATM using Card Scanning Plus OTP
17	Kadam Aashwini Vijay	Asst. Prof. Sonali M. Patil	Online book store
18	Koli Dhananjay Hiralal	Asst. Prof. Anil R. Patil	Student Result Management System
19	Lohar Hemant Rajesh	Asst. Prof. Tahir Mansuri	Simple E-Learning System
20	Mahale Dnyaneshwar Dadabhai	Asst. Prof. Sonali M. Patil	Online Railway Reservation System
21	Manyar Aadil Sk Salim	Asst. Prof. Gayatri P. Patil	Sentiment based Movie Rating System
22	More Harshal Rajendra	Asst. Prof. Gayatri P. Patil	Online Employee Attendance System
23	Padavi Terasing Kusana	Asst. Prof. Sonali M. Patil	Online Lead Management System
24	Patil Vishal Suresh	Asst. Prof. Anil R. Patil	Wedding Planner App
25	Patil Alesh Madan	Asst. Prof. Anil R. Patil	Inventory.& Sales Management System
26	Patil Bhushan Dnyaneshwar	Asst. Prof. Anil R. Patil	Water Billing Management System
27	Patil Harshal Rajendra	Asst. Prof. Gayatri P. Patil	Fitness App
28	Patil Jaydip Anand	Asst. Prof. Sonali M. Patil	Online Birth Certificate Management System
29	Patil Jayesh Chunilal	Asst. Prof. Sonali M. Patil	Online Job Portal
30	Patil Nayana Dipak	Asst. Prof. Tahir Mansuri	School Management System



No	Student Name	Guide Name	Project Name
31	Patil Pankaj Bhika	Asst. Prof. Gayatri P. Patil	Automatic Question Paper Generator System
32	Patil Vinod Bhaskar	Asst. Prof. Tahir Mansuri	Hotel Management System
33	Patil Yash Santosh	Asst. Prof. Anil R. Patil	Covid-19 Travel Pass Management System
34	Pawar Krushnakant Suresharao	Asst. Prof. Tahir Mansuri	Ingredient Stock management System
35	Rajput oshansinh Rajendrasinh	Asst. Prof. Sonali M. Patil	Online Veterinary Appointment System
36	Sonavane Gaurav Ravindra	Asst. Prof. Gayatri P. Patil	Bus Pass Management System
37	Sonawane Ganesh Hari	Asst. Prof. Sonali M. Patil	Attendance Management System
38	Songare Karina Santosh	Asst. Prof. Anil R. Patil	Online School Document Processing
39	Tamkhane Harshal Atmaram	Asst. Prof. Gayatri P. Patil	GST Billing
40	Thakare Dhanraj Zulal	Asst. Prof. Anil R. Patil	Air Cargo Management System
41	Thakare Mayur Rupsing	Asst. Prof. Tahir Mansuri	School Club Management System
42	Thakare Urvendrakumar Vijay	Asst. Prof. Gayatri P. Patil	Design and Implementation of Covid-19 Directory on Vaccination System
43	Varude Pankaj Bhila	Asst. Prof. Tahir Mansuri	Automatic Question Paper Generator System



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3	Ishwar Kailas Bachhav	Modern Agriculture
4	Hemraj Arun Patil	World Food Problems
5	Bhagyashri Shriram Marathe	Global Warming
6	Mahek Siraj Khatik	Ozone Depletion
7	Snehal Suresh Salunke	Environmental Hazards
8	Hitesh Satish Patil	Droughts
9	Kalpesh Ramakant Chodhary	Landslides
,10	Chetan Arun Patil	Land Degradation
11	Chetan Avinash Patil	Rain Water Harvesting
12	Vivek Nimba Patil	Social Issues And Environment
13	Gokul Ranchod Desale	Water Shed Management
14	Nitesha Bhatu Salunkhe	Environmental Pollution: Health Risk And Case Studies
15	Shivkanya Sunil Chouhan	Environmental Sanitation
16	Krushna Indrasing Girase	Water Conservation
17	Nilesh Shivram More	Endemic Species: Animal And Plants
18	Dipak Dinesh Shirsath	Solid Waste Pollution
19	Yogesh Suresh Badgujar	Nuclear Hazards
20	Manoj Dagadu Marathe	Over Fishing



Sr.No	NAME	PROJECT TOPIC
21	Tejal Maoj Mothe	Resettlement And Rehabitilisation Of People
22	Pankaj Jaypal Girase	Foob Chain
23	Lalit Gotu Patil	Ocean Acidification
24	Pratiksha Chatur Patil	Melting Sea Ice And Sea Level Rise
25	Sarthak Sunil Saindane	Marine Life
26	Goutam Subhash Sharma	Air Pollution
27	Aryan Mohan Sirsath	Water Pollution
28	Manoj Mahadhanta Johri	Sound/Noise Pollution
29	Prafull Sunil Patil	Natural Resourses Depletion
30	Kalpesh Gulab Patil	Medical Waste Disposal
31	Mayur Ashok Jadhav	Water
32	Avinash Ashok Dhangar	Food And Water Insecurity
33	Gaurav Jitendra Patil	Fast Fashion And Textile Waste
34	Prerana Rajendrasing Suryawanshi	Carbon Foot printing
35	Darshan Ravindra Mistari	Environment Protection Act
36	Riteshkumar Rajendra Badgujar	Environmental Ethics: Issues And Solution
37	Kuldip Vijaysing Girase	Acid Rain
38	Vijay Arjun Koli	Green House Effect
39	Vishal Vasant Koli	Waste Water Management
40	Aniket Ramkrishna Dhangar	Bioinformatics
41	Danish Jamil Mansuri	Solid Waste Management
42	Hassan Rahim Mansuri	Natural Disaster Management
43	Prashant Rupsing Girase	Animal Husbandary
44	Himmatsing Dnyaneshwar Girase	Industrial Pollution
15 I	Umer Shakiluddin Shaikh	Electronic Waste Management
6 I	Devid Shubhash Thakare	Environmental Awareness

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47	Manthan Ravindra Sonawane	Public Health Issue
48	Khushal Vitthal Patil	Water Cycle
49	Sopan Padsing Girase	Endangered Species
50	Neha Ravindra Suryawanshi	Human Population And Environment
51	Mayuri Ratilal Chavhan	Environment And Human Health
52	Nawaj Gufran Pinjari	Environmental Legislation
53	Shubham Santosh Gangurde	Extinct Species
54	Kaveri Mithesing Girase	Natural Disaster: Causes And Management
55	Mohammad Raza Gulam Husen - Pinjari	Environmental Degradation: Oil Spillage
56	Rupsing Bhikesing Rajput	Biosensors
57	Dipali Jagdish Nikumbhe	Environmental Management And Planning
58	Uday Limba Suryawanshi	Bioremediation
59	Suryawanshi Shailesh Chatur	Remote Sensing
60	Darshan Vinayak Jadhav	Desertification
61	Umesh Suresh Kuwar	Ecosystem: Associated Problems
62	Neha Bhagwan Patil .	Dams: Benefits And Problems
63	Aftab Khalid Sayyed	Ecological Succession
64	Faizan Shaikh Riyaz Khatik	Waste Management: Recycle And Reuse
65	Awais Ayyub Beldar	Water Resource Management
66	Syd Waseem Syd Yunus Beldar	Natural Resources
67	Tejaswini Bharatsing Girase	Effect Of Floods
68	Mayur Tejraj Jagtap	Biodiversity
69	Hitesh Ravindra Borse	Health Hazards In India
70	Vinay Dhanraj Jagtap	Deforestration : Effects On Environment
71	Harshal Chunilal Tamboli	Renewable And Non Renewable And Non Renewable
72	Jayesh Uttamrao Pawar	Renewable And Non Renewable resources
73	Pradip Masaribhai Jadhav	Energy: Solar, Thermal, Wind, Hydro Power Animal Conservation
4	Raj Sunil Khanvilkar	Migration: Causes And Effects

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Sr.No	NAME	PROJECT TOPIC	
75	Amir Ansar Teli	Biofertilizers -	
76	Ajay Bharat Patel	Methane Emission From Landfills: Effects And Solution	
77	Harshal Ravindra Koli	Food Aldutration	
78	Prajwal Ganesh Behere	Survival For Existence	
79	Yash Krushna Mahajan	Energy Pyramid	
80	Chinmay Chhagan Patil	Food Web	
81	Pranav Mahesh Chaudhari	Hotspots	
82	Umesh Suresh Jadhav	Need Of Sanctuary	
83	Devendra Ranjitsing Rajput	Environmental Justice	
84	Sandip Ratilal Sadarao	Plastic Pollution	
85	Mustufa Tejun Kachwala		
86	Jayesh Shantilal Sonar	State Of Earth: Environmental Challenges Nuclear Pollution	



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This is to certify that

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Has satisfactorily completed Project Work entitled

#### Water Billing Management System

As prescribed by Kavayitri Bahinabai Chaudhari, North Maharashtra University Jalgaon as a part of the syllabus for the partial fulfillment in Bachelor of Computer Applications in Third Year for the Academic year 2022-23.

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Asst. Prof. Anil R. Patil

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## Online Veterinary Appointment System

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## Air Cargo Management System

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Asst. Prof. Anil R. Patil

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Spahada Dist Nandurbar

# A Fieldwork Report On "Students Opinion On E-Government Scholarship"

#### -Affiliated To-Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon

-Submitted By-Mr. Chetan Pravin Jadhav PRN No:-2020015400219232

- Guided By -Asst prof. Sonali M. Patil

- Submitted To -S.T.Co.Op.Education Society's LTD. Institute of Management Research and Development, Shahada, Dist. Nandurbar.

-Faculty Of Science And Technology -BACHELOR IN COMPUTER APPLICATION (BCA)



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Sonali M. Patil Project Guide

Prof.Anil R. Patil

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**Examiner 1** 

Examiner 2

#### Declaration

Hereby Declare That,

I, Chetan Pravin Jadhav this Fieldwork Report of Titled "STUDENTS OPONION ON E-GOVERNACE SCHOLARSHIP" has been made up by our own efforts, under the Guidance of Asst.Prof. Sonali M. Patil .This Project is submitted to the S.T.Co.Op. Education Society's Institute of Management Research and Development, shahada. We also Declare that this project report is not Previously submitted by any other Institute.

29/11/2022 Date

Signature Signature

#### Acknowledgement.

Lets us take opportunity to show our deep-set gratitude to director of Institute Of Management Research and Development Respected Prof. Anil R. Patil for hir timely kind co-operation and providing Required Facilities for our Fieldwork. Our special acknowledgement to our project Guides. Asst.Prof. Sonali M. Patil for his timely Suggestion, helps, guidance and encouragement during the Project. We are also thankful to the (HOD) and Teaching Staff to Give us Kindly support in completion of Our project. It Would be Wrong on our Part if we are Forget to meation those who had big hand in the Successful completion of Project. We are also thankful to all who directly helpme in completion of project. last But not the least we are obliged to those who had a greathand in our achivement.

Chetan Pravin Jadhav (TY.BCA)

#### Abstract :-

Scholarship is a critical tool to facilitate education for eligible students, especially those who are socially and economically challenged in the state, and bring them on to the mainstream development track. Maharashtra State Scholarship Board processes large amount of scholarship applications every year. The E-scholarship system provides online application solutions that save time, and sends notifications using SMS alerts and emails on the progress of application in a timely and transparent manner. But there are some issues faced by students which are they didn't get scholarship on time. So this issues 100 students participated a survey for this research and shared there experience.

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#### Chapter 1

#### INTRODUCTION

Supporting education through scholarships to students of higher learning is an important aspect of government's effort to assist students at all levels of learning to allow them afford the basic needs that accrue during their studies. It's a government plan to develop a critical mass of professionals who would serve as catalysts of change and agents of scientific and technological advancement, as well as sustainable economic development. However, the cost of education has risen drastically over the past few years hindering the families of low income earners to send their children to school as they can barely afford the cost. Scholarship as defined by "Student/Applicant log in to the website to create an account. Log in with account details, upload passport, fill the application form and upload qualifications. The applicants also can view feedback to enable her/him know the progress of their applications" is a grant or payment made to support a student's education, awarded on the basis of academic or other achievement. Many scholarships are awarded based on merit. However, some also take into account financial need. Scholarships do not have to be repaid.

This field work is basically concerned with the student's opinion about E-government scholarship. The need of this field work is to find out how many students take benefit from government scholarship, to know how many students use E-government scholarship portal to fill up the scholarship form, also to know the challenges faced by the students during the process of taking benefit from the E-government scholarship and generating field report on this field work using MS Excel. We conducted field work online during this pandemic of COVID by making questionnaires using Google forms and sending it to the students on social network platforms. We have use Pie chart to show the status of our survey.

#### Chapter 2

#### LITERATURE REVIEW

The use of the Internet has been extremely fast since it can now be accessed almost anywhere by numerous means. It has also introduced a new era of computing, providing the basis for promising application areas like e-banking, e-exams, e-ticketing. In the late '90s came the introduction of the World Wide Web, and the implementation of the Web browser. This graphically oriented view of data quickly became popular for the Internet. Today we find much of our on-line interaction taking place through the browser. As the number of users on the World Wide Web increases every day, its use in different areas is also growing. One of the most powerful aspects of the web is that anybody who has internet access can browse on the net. This enables sharing the information worldwide. According to Internet has become the means for conducting growing numbers of transactions because of the speed, flexibility, and efficiency that it offers. This technology is required by every organization if it does want to reach out to its customers in this age of globalization. The term "scholarship" according to is a form of financial assistance that does not require repayment or employment and which is usually offered to students who show potential for distinction, or who possess certain characteristics important to the scholarship provider (such as religious beliefs, hobbies, ethnicity, etc.). A scholarship is a form of financial aid that is specifically geared towards students who are attending college It is used as a way of financing their education, and it may pay a part of their education, orit may pay the entire cost of a student's tuition. As point out, Scholarships will require students to meet certain requirements, both before and after they've obtained it.

There is currently no literature on the E-Governance scholarship. But there is some literature on E-Governance Loss of Interpersonal Communication, High Setup Cost

and Technical Difficulties, Illiteracy, Cybercrime or Leakage of Personal Information. The paper posits that while doing any work on E-Governance user faced sometime server down problem, they feel insecure while providing any personal information because of there is chances of leakage of personal information. It does not address the issue I am looking at: does students get scholarship on a time, what problems students face during process of filling the scholarship form using the E-Governance scholarship portal.

#### 2.1 Objectives:-

#### To analyse the problem that :-

- 1. Does students get scholarship on a time.
- What problems students face during process of filling the scholarship form using the E-Governance scholarship portal.
- When students have any questions while filling scholarship form on E-Governance scholarship portal does they able to contact help center and after that does they get answered in timely manner.
- 4. How many students able to fill there scholarship form themselves.

#### Chapter 3

#### What is E-Government

#### 3.1 E-Government Scholarship :-

A scholarship is an award of financial aid for student to further education at a private elementary or secondary school or a public post secondary college university or other academic institution. Scholarship are awarded based upon various criteria, such as academic merit diversity and inclusion athletic skill, financial need, among other or some combination of these criteria. Scholarship criteria usually reflect the values and goals of Donner or founder of the award. While scholarship recipients Are not required to repay Scholarship, The awards may required that the recipient continue to meet certain requirements during their period of support, such maintaining a minimum grade point average or engaging In a certain activity for example, playing on a school sports team For athletic scholarship holders, or serving as teaching assistant for some graduate scholarships.

Scholarships may provide a monetary award an in-kind award eg:- waiving of tuition fees or fees for housing in dormitory or combination. some prestigious highly competitive Scholarship are well known even Outside the Academy communication, such as Fulbright Scholarship and Rhodes scholarship.

#### 3.2 Working of E-government in E-government scholarship :-

This initiatives aims at making the scholarship process easy. From submitting the application, verification, sanction and disbursal to end beneficiary everything related to government scholarships can be done on this single portal online.

#### 3.3 Advantages of E-government Scholarship:-

#### 1. Scholarships help to lessen the impact of rising tuition costs:-

Tuition is on the rise nation-wide and scholarships give access to higher education for students of all income levels.

#### II . Scholarships help students have more time to focus on their studies:-

Research shows that work can take up more than 15 hours per week and becomes an impediment to academic success. For many students the stresses of working make it difficult for them to graduate on time, or graduate with the high grades they have the potential to achieve. For other students, the work/study life is unsustainable, and they discontinue their studies all together.

# III . Scholarships decrease the number and amount of loans students need to take to complete higher education:

Two-thirds of college students now graduate with loans, and their average college debt is nearly \$20,000 — an increase of more than 50% since the early 90's. People involved in shaping public policy and allocating funds often view loans and grants on the same level as "aid".

#### IV . Scholarships add to federal and state financial assistance:-

Many students do not qualify for federal aid as federal policy has long been focused on access for low-income students. States and colleges have become increasingly focused on getting high-income, high-achieving students to attend their institutions or to remain in-state.

#### V . Scholarships can fill the gap:

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Scholarship assistance can support students who fall in the gap between high and low income levels — students who may not qualify for a need based scholarship and who do not meet the criteria for a merit based scholarship.

#### 3.4 Types of Scholarship:

#### The most common scholarships may be classified as :-

- Merit-based: These awards are based on a student's academic, artistic, athletic or other abilities, and often factor in an applicant's extracurricular activities and community service record. The most common merit-based scholarships, awarded by either private organizations or directly by a student's intended college, recognize academic achievement or high scores on standardized tests Most such merit-based scholarships are paid directly by the institution the student attends, rather than issued directly to the student.
- <u>Need-based</u>: Some private need-based awards are confusingly called scholarships, and require the results of a FAFSA (the family's EFC). However, scholarships are often merit-based, while grants tend to be need-based.
- Athletic: Awarded to students with exceptional skill in a sport. Often
  this is so that the student will be available to attend the school or
  college and play the sport on their team, although in some countries
  government-funded sports scholarships are available, allowing
  scholarship holders to train for international representation.
- College specific :- College-specific scholarships are offered by individual colleges and universities to highly qualified applicants. These scholarships are given on the basis of academic and personal achievement. Some scholarships have a "bond" requirement. Recipients may be required to work for a particular employer for a specified period of time or to work in rural or remote areas; otherwise, they may be required to repay the value of the support they received

from the scholarship. This is particularly the case with education and nursing scholarships for people prepared to work in rural and remote areas. The programs offered by the uniformed services of the United States (Army, Navy, Marine Corps, Air Force, Coast Guard, National Oceanic and Atmospheric Administration commissioned corps, and Public Health Service Commissioned Corps) sometimes resemble such scholarships.

Brand scholarships: These scholarships are sponsored by a corporation that is trying to gain attention to their brand, or a cause.
 Sometimes these scholarships are referred to as branded scholarships. The Miss America beauty pageant is a famous example of a brand scholarship.

#### Chapter 4

#### Research Methodology

We recruited 100 users (86 male, 14 female) among them 68 students were beneficiary and 32 students were non-beneficiary. Almost 40 students were native English speakers. We focus on how many students get scholarship on a time, What problems students face during process of filling the scholarship form using the E-Governance scholarship portal, When students have any questions while filling scholarship form on E-Governance scholarship portal does they able to contact help center and after that does they get answered in timely manner, How many students able to fill there scholarship form themselves.

Our survey involved 15 questions which are created by using google form and provided to user on social media platform. In which we asked them about what challenges they face on E-Government scholarship portal. Also to know how many students take government scholarship, the process of filling scholarship form, can they fill themselves or go somewhere to fill the form.

The evaluation of the results of survey was based on according to students response what changes students expect in future.

#### Chapter 5

#### **Data Analysis and interpretation**

Data analysis and interpretation is the process of assigning meaning to the collected information and determining the conclusions, significance and implications of the findings. It is an important and exciting step in the process of research. In all research studies, analysis follows data collection.

#### 6.1 What is Data Analysis:-

Involves actions and methods performed on data that help describe facts, detect patterns, develop explanations and test hypotheses. This includes data quality assurance, statistical data analysis, modeling, and interpretation of results.

#### 6.2 The Process of Data Analysis:

Analysis refers to breaking a whole into its separate components for individual examination. Data analysis is a process for obtaining raw data and converting it into information useful for decision making by users. Data are collected and analyzed to answer questions, test hypotheses or disprove theories.

#### Data requirements:-

The data are necessary as inputs to the analysis, which is specified based upon the requirements of those directing the analysis or customers (who will use the finished product of the analysis). The general type of entity upon which the data will be collected is referred to as an experimental unit (e.g., a person or population of people).

#### • Data collection :-

Data are collected from a variety of sources. The requirements may be communicated by analysts to custodians of the data, such as information technology personnel within an organization. The data may also be obtained through interviews, downloads from online sources, or reading documentation.

#### • Data processing :-

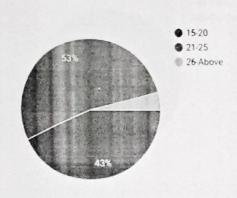
Data initially obtained must be processed or organized for analysis. For instance, these may involve placing data into pie chart (i.e., pie chart) for further analysis, such as within a spreadsheet or statistical software

#### :-

#### 1. What is your Age?

What is your Age?

100 responses



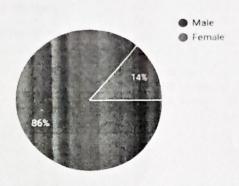
43%
53%
4%

#### Interpretation:-

From the 100 respondent, there are 43% students had Age between 15 – 20,51 students had Age between 21 – 26 and 53% students had Age 26 or Above.

#### 2. What is your Gender?

What is your Gender?

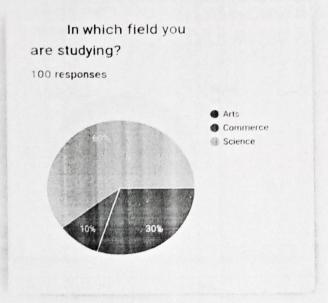


Male	86%	
Female	14%	

#### Interpretation:-

As shown in above pie-chart there are total of 100 students from which 86%were Male and 14% were Female respondent.

#### 3. In which field you are studying?



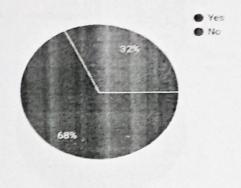
Arts	30%
Commerce	10%
Science	60%

#### Interpretation:-

From the 100 respondent, there are 13 students are studying in Arts , 34 students studying in Commerce and 53 students studying in Science.

#### 4. Did you know about Government scholarship?

. Did you know about Government scholarship?



Yes	68%	
No	32%	

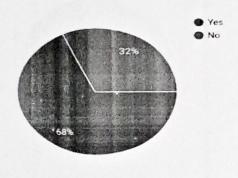
#### Interpretation:-

From the 100 respondent, there are 84 students know about Government Scholarship and 16 students does not know about Government Scholarship.

# 5. Did you take benefits from Government Scholarship?

Did you take benefits from Government scholarship?

100 responses



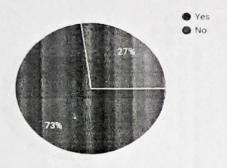
Yes	68%
No	32%

# Interpretation:-

From the 100 respondent, there are 68% students who take benefit from thegovernment scholarship and 32% students are Non-Beneficiary.

# 6. Did you know the process of filling scholarship form?

Did you know the process of filling scholarship form?



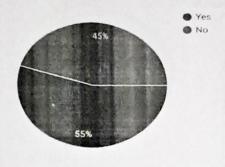
Yes	73%
No	27%

# Interpretation:-

From the 100 respondent, there are 73% students know the process of filling Scholarship form and 27% students does not know the process of filling the Scholarship form.

# 8. Did you face problems while filling Government Scholarship form?

Did you face problems while filling Government scholarship form? 100 responses

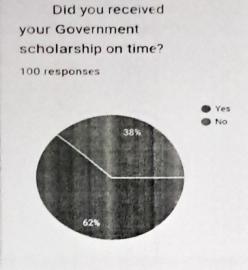


55%	
45%	

# Interpretation:-

From the 100 respondent, there are 55% students face problems whilefilling Government Scholarship form and 45% students fill the form easily.

# 9. Did you received your Government Scholarship on time?

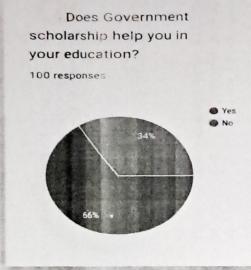


Yes	62%	
No	38%	

# Interpretation:-

From the 100 respondent, there are 62% students who get there GovernmentScholarship on time and 38% students who no get there Government Scholarship on time.

# 10. Does Government Scholarship help you in your education?



66%
34%

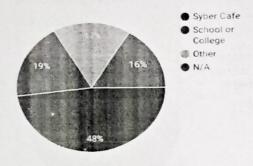
# Interpretation:-

Forms response chart. Question title: Does Government scholarship helps you in your education? Out of 100 responses, 66% students says YESand 34% students says No.

# 11. Where are you go to fill the Government Scholarship form?

Where are you go to fill the Government scholarship form?

100 responses



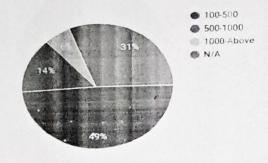
Cyber Café	48%	
College or School	19%	
Other	17%	
N/A	16%	

# Interpretation:-

In this question out of 100 students, there are 48% students go to Cyber Café for filling the scholarship form, 19% students fill the form in there School or College Campos, 17% students get help from other and fill the form.

# 12. How much charges you have pay while filling the Government Scholarship form?

How much charges you have pay while filling the Government scholarship form?



100 - 500	49%	
500 - 1000	14%	
1000 to Above	6%	
N/A	31%	

# Interpretation:-

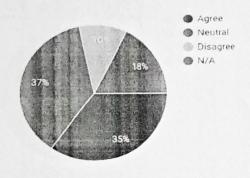
In this question out of 100 students, there are 49% students pay Rs.

Between 100 – 500, 14% students pay Rs. Between 500 – 1000 and 6% students pay Rs. 1000 or above.

## 13. I was able to easily find scholarship on website.

I was able to easily find scholarship on the website.

100 responses

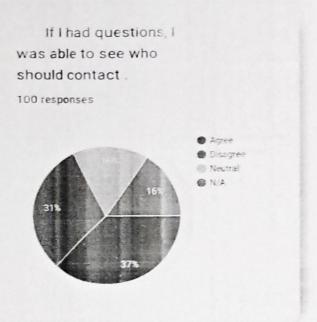


Agree	35%
Neutral	37%
Disagree	10%
N/A	18%

# Interpretation:-

In this question out of 100 students, there are 35%students agree that they should easily find scholarship on website and 10% students disagree with that , 37% students neutral or it means that they don't have any idea about that.

## 14. If I had questions, I was able to see who should contact.



Agree	37%	
Neutral	16%	
Disagree	31%	
N/A	16%	

# Interpretation:-

In this question out of 100 students, there are 37% students able to see who should contact when they have any question or doubt, 31% students can't able see any contact and 16% students are neutral or it means that they don't understand in time whomshould they contact.

# Chapter 6

# Conclusion

After Generating the report we concluded that the out of 100 students, 84% students knows about E-Government scholarship and 16% students don't know about it. Students who knows about E-Government scholarship from which 68% students take benefits and 32% students don't get benefits from E-Government scholarship. From the beneficiary students 73% students know process of filling form and from which 48% students go to cyber café, 19% students fill form in school or college and remaining 33% students fill form themselves or they take help from others.

In this survey we found out from beneficiary students that 38% students don't get scholarship on time and 62% students get there scholarship on time. Also asked the questions to students that if they had a questions or any problem while filling the form E-Scholarship portal and they asked that question to the help center does they get answer.

- Students much provided with scholarship on time.
- On E-Scholarship portal provided helpline number must give response to students on time with there question's answer.

# References:-

www.google.com

# Questionnaires

1. What is your Name?

2.	Enter Your email address
3.	What is your Age?
	0 15 - 20
	O 21 - 25
	O 26 - Above
4.	What is your Gender?
	o Male
	o Female
5.	In which field you are studying?
	o Arts
	o Commerce
	o Science
6.	Did you know about Government scholarship?
	o Yes
	o No
7.	Did you take benefits from Government scholarship?
	o Yes
	o No
8.	Did you know the process of filling scholarship form?
	o Yes
	o No

9.		Did you face problems while filling Government scholarship form?
	0	Yes
	0	No
10.		Did you received your Government scholarship on time?
	0	Yes
	0	No
		Does Government scholarship help you in your education?
	0	Yes
	0	No
		Where are you go to fill the Government scholarship form?
11.	0	Cyber Café
	0	School or College
	С	Other
	0	N/A
		How much charges you have pay while filling the Government
12.		
sc	hol	arship form?
	0	100 - 500
	0	500 - 1000
	0	1000 - Above

o N/A

Please rate based on your experience with the scholarship office and website.

	Long the to posity find scholarship on the Website
13.	I was able to easily find scholarship on the website.
	o Agree
	Neutral
	o Disagree
	o N/A
	If I had questions, I was able to see who should contact.
14.	o Agree
	o Neutral
	o Disagree
	○ N/A
	15. I was able to easily find scholarships that I was eligible for.
	o Agree
	<ul> <li>Neutral</li> </ul>
	o Disagree
	o N/A

# Respondent Information :-

	Name	Village/City	Age?	Gender?
1	G patil	Dondaicha	15-20	Male
	Pushkar nandu deore	Indave	21-25	Male
-	Nikhil aklade	Indave	15-20	Male
	Kunal sonawane	indawe	15-20	Male
	Tushar praksh deore	Dhule	15-20	Male
	Chetan prkash sonwane	Indave	15-20	Male
and the same of th	Dipak Sonawane	Indawe	15-20	Male
	Mayur Sonawane	Indave	21-25	Male
THE RESERVE AND ADDRESS OF THE PARTY OF THE	Prathamesh Bachhav	Shahada	15-20	Male
	PRAKASH KRUSHNA GUNJALE	PRATAPPUR	15-20	Male
	GIRASE UDAY SANJAYSING	Khairve	15-20	Male
	Tushar Patil	Indawe	15-20	Male
	Hitesh satish patil	Vaindane	15-20	Male
	Ishwar	Dondaicha	21-25	Male
	Darshan vinayak jadhav	Daul	15-20	Male
16	Gaurav rajdhar bhoi	Virdel	15-20	Male
17	Vikas bhimarao samudre	Dhawade	15-20	Male
	Yogesh lotan Shirsale	Shahada	15-20	Male
19	Vaibhav Bachchhav	Shahada	21-25	Male
		Shanaimadal		
	Rakesh patil		21-25	Male
	Aniket Dhangar	Ghotane	15-20	Male
	Koli Vishal	Rami	21-25	Male
	Ratan ravindra sutar	Taloda	21-25	Male
	Sonawane Nirav Sanjay	Indawe	15-20	Male
	Patil Gopal Dnyaneshwar	Indave	21-25	Male
	Pruthviraj. Aklade	Indawe	15-20	Male
	Mustafa Kanchwala	Shahada	15-20	Male
	Mayur Prakash Thakare	Shanimandal	15-20	Male
	Harshal	Ranala	15-20	Male
	Sonawane Prashant	Indawe	15-20	Male
	Patil Chetan yograj	Parsole	15-20	Male
32	jayesh	vadali	15-20	Male
	Mahendra Patil	P town	15-20	Male
	Bhadane Mayuri Vakil	Indavee	21-25	Female
35	Rupali Padmor	Hatti	21-25	Female
	Vijaya Kishor bagul	Dusane	15-20	Female
	Ramkrishna Dhangar	Malpur	21-25	Male
38	Kuldeep naval sonavane	Indawe	21-25	Male
39	Chetan ragunath sonawane	Indwe	21-25	Male
40	Hemkant bapu roakde	Shahada	15-20	Male
41	Ganesh more	Hatti	21-25	Male
42	Purushottam gaikawad	Valwhe	15-20	Male
43	Bhavesh Dilip Pawar	Indawe	21-25	Male
44	Nandini pravin jadhav	Indwe	15-20	Female
	Kishor devre	Indawe	21-25	Male
46	Rajesh Ashok patil	Shahada	21-25	Male
THE RESIDENCE OF THE PARTY OF T	Saurabh Borse	Indave	21-25	Male
	Ramu Wagh	Indawe	21-25	Male
	Nilkanth Sonawane	Indave	21-25	Male
	Hire sonal ambar	Indave	21-25	Female
	Bagesho yuaraj surayvanshi	Indave	21-25	Female
52	Chandrkant nimba iadhav	Indave	21-25	Male
	The state of the s		The second second	PATONO .

53	rogesh adhikar senvane	Indave	21-25	Male
	/asudev patil	Endave	21-25	Male
	Wagh Nandini Sudam	इà¤,à¤jà¤j.े	15-20	Female
	Dipak Brijlal pavar	Indave	21-25	Male
	Bhatabai nikum	Indawe	15-20	Female
A PARTY OF THE PAR	Wach Prajakta	Village	15-20	Female
	Hemkant chdrakant chadole	Indave	21-25	Male
-		Indave	21-25	Male
	Rakesh pavar		26-Above	Male
61	Samadhan himat deore	Indave	20-ADOVE	
60	Dhawaah Caaswara	At post Indawe tal. Sakri Dist.Dhule	15-20	Male
	Bhavesh Sonawane		26-Above	Male
	Savkar patil	Indave	15-20	Male
	Vaibhav patil	Indave	21-25	Female
	Kalyani sonvane	Indave		Male
	Kunal himmat bhadhane	Indave	15-20	Male
	Pawar kiran	Indawe	21-25	Male
	Anil bharat deore	Indave	21-25	Male
	Jagdish dilip jadhav	Indave	21-25	Male
	Kapil Aklade	Indawe	21-25	Male
	Samadhan pawar	Indave	26-Above	Male
	Pramod jadhav	Indave	21-25	Male
	Pankaj	Indave	15-20	Female
	Wagh sarita ambalal	Dondaicha	21-25	Male
	Sachin Ashok jadhav	Indave	21-25	Male
	Dager mana deore	Vaidane	15-20	
	Pavbha nimba pavar	Indave	21-25	Male
	Kalyan popat jadhav	indave	21-25	Male
	Hitesh Bilade	Dondaicha	21-25	Male
	Umesh sonawane	Indawe	15-20	Male
	Rahul dadaji thakare	Indave	21-25	Male
	Sandip ahire	Indave	21-25	Male
	Sakshi wagh	Indave	21-25	Female
	Vaibhav shivaji bhadhane	Indave	15-20	Male
85	Salunke kaustubh sandip	Indave	15-20	Male
86	Paras patil	Indev	15-20	Male
	Sonali pandit jadhav	Indave	21-25	Female
	Ghanshyam patil	Indave	21-25	Male
	Yogesh Patil	Jamner	15-20	Male
	Bhati nagraj jadhav	Indave	21-25	Male
	Shubham jadhav	Indave	21-25	Male
	Nilesh salve	Indave	21-25	Male
	Rahul Borase	Indave	21-25	Male
	Bhushan Patil	Indave	21-25	Male
	Roshan jadhav	Indave	15-20	
	Prabhakar Sonawane	Indawe	26-Above	Male
	Aakash mohan Akalde	Indawe	21-25	Male
	Patil kaveri vedu	Indave		Male
	Bhushan Nana Deore		21-25	Female
	Pankaj gokul wagh	Indwe	21-25	Male
101	arikaj gokul wagn	Indave	21-25	Male



# S.T.Co.Op.Edu.Society's Ltd. INSTITUTE OF MANAGEMENT RESEARCH & DEVELOPMENT, SHAHADA (Affi. Kavayitri Bahinabai Chaudhari

North Maharashtra University, Jalgaon)

College Code- 230102

A PROJECT REPORT ON

# WEATHER FORECAST MANAGEMENT SYSTEM

In partial fulfillment of requirements for the degree of

**Bachelor in Computer Application** 

Academic year: - 2022-2023

Submitted By

Name: JAGTAP RAKESH SUBHASH PRN: 2020015400222385

Guided by

Asst. Prof. Sonali M. Patil



# S.T.Co.Op.Edu.Society's Ltd.

# INSTITUTE OF MANAGEMENT RESEARCH AND DEVELOPMENT, SHAHADA

(Affi. Kavayitri Bahinabai Chaudhari North Maharashtra

University, Jalgaon)

College Code- 230102

Year 2022-23

A Project Report on

# Weather Forecast Management System

In partial fulfillment of requirements for the degree of BACHELOR OF COMPUTER APPLICATIONS

Submitted By -

Name: JAGTAP RAKESH SUBHASH

PRN No.: 2020015400222385

Course Name: T.Y. BCA

Guided By -

Guide Name: Asst. Prof. Sonali M. Patil



# S. T. Co. Op. Edu. Society's Institute of Management Research and Developement, Shahada, Dist. Nandurbar (MS)

# CERTIFICATE

This is to certify that

JAGTAP RAKESH SUBHASH

PRN No. - 2020015400222385

Has satisfactorily completed Project Work entitled

# Weather Forecast Management System

As prescribed by Kavayitri Bahinabai Chaudhari, North Maharashtra University Jalgaon as a part of the syllabus for the partial fulfillment in Bachelor of Computer Applications in Third Year for the Academic year 2022-23.

Guide

External 1

Asst. Prof. Sonali M. Patil

Director

Asst. Prof. Anil R Patil DIRECTOR

S.T.Co.op.Edu.Society's Ltd. Institute of Management Research and Development Shahada Dist Nandurbar



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Guide

External 1

Asst. Prof. Sonali M. Patil

Asst. Prof. Anil R Patil DIRECTOR

S.T.Ce.op.Edu.Society's Ltd. Institute of Management Research and Development Shahada Dist Nandurbar

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# 1. INTRODUCTION

#### 1 INTRODUCTION

Weather Forecast Management is an important aspect of weather analysis and prediction. With the help of Python, we can create applications that can fetch real-time weather data and provide weather forecasts based on various parameters.

To get started with weather forecast management in Python, we first need to get access to weather data. This can be done by using weather APIs like OpenWeatherMap, Weather Underground, etc. These APIs provide real-time and historical weather data for any location in the world.

Once we have access to weather data, we can use Python libraries like Pandas, NumPy, and Matplotlib to analyze the data and create visualizations. We can also use machine learning libraries like Scikit-learn to create predictive models that can forecast the weather based on past data.

To get started with creating a weather forecasting application in Python, we can follow these steps

- Choose a weather API and sign up for an account to get an API key. Use a Python library like Requests to make API calls and fetch weather data for a particular location.
- Use Pandas to analyze and manipulate the weather data. We can use techniques like data cleaning, filtering, and aggregation to extract meaningful insights from the data.
- Use Matplotlib to create visualizations like line charts, bar charts, and scatter plots to represent the weather data in an easy-to-understand format.
- Use Scikit-learn to create predictive models that can forecast the weather based on past data. We can use techniques like linear regression, decision trees, and random forests to create these models.

- Create a user interface using a Python GUI library like Tkinter or PyQT to allow users to input a location and see the weather forecast for that location.
- With these steps, we can create a weather forecasting application in Python that can provide real-time weather data and forecasts for any location in the world.

## 1.1 Problem Definition

You are tasked with building a weather forecast management system in Python that allows users to obtain weather forecasts for various locations. The system should allow users to input a location (i.e. city, state, or zip code) and retrieve the current weather conditions and forecast for the next 5 days.

The weather forecast data should be obtained from a public API, such as Open-WeatherMap, and the system should be designed to handle errors and unexpected responses from the API. The data should be presented to the user in a clear and user-friendly format, such as a text-based report or a graphical display.

Additionally, the system should allow users to save their favorite locations and retrieve the weather forecasts for those locations without having to input the location each time. The system should also provide options for users to set up alerts for certain weather conditions, such as rain or snow, for their favorite locations.

Your solution should be well-designed, well-structured, and documented. You should also include test cases to ensure that the system works as expected under various conditions.

#### 1.2 System Architecture

A weather forecast management system in Python can be designed using the following components and architecture-

• User interface: This component is responsible for receiving user inputs, displaying information, and interacting with the other components of the system. It can be implemented using a command-line interface (CLI), a graphical user interface (GUI), or a web interface.

- Location manager: This component is responsible for managing the user's favorite locations and storing them in a database or file system. It should also provide an interface for adding, removing, and retrieving locations.
- Weather data provider: This component is responsible for retrieving weather forecast data from a public API, such as OpenWeatherMap. It should handle errors and unexpected responses from the API and provide a consistent interface for retrieving weather data.
- Data processor: This component is responsible for processing the weather data retrieved from the weather data provider and preparing it for display to the user. It can perform tasks such as formatting, filtering, and sorting the data.
- Alert manager: This component is responsible for managing user alerts for specific weather conditions. It should allow users to set up alerts for their favorite locations and send notifications when the specified weather conditions are met.
- The architecture of the system can be implemented using a modular approach, with each component as a separate module that can be developed, tested, and deployed independently. The modules should communicate with each other using well-defined interfaces, such as APIs or message queues.

# 2.PHASES IN DEVELOPMENT OF PROJECT

### 2 PHASES IN DEVELOPMENT OF PROJECT

This project management process generally includes four phases: initiating, planning, executing, and closing. Some may also include a fifth "monitoring and controlling" phase between the executing and closing stages. By following each step, a project team increases the chance of achieving its goals. The project management life cycle is a step-by-step framework of best practices used to shepherd a project from its beginning to its end. It provides project managers with a structured way to create, execute, and finish a project.

This project management process generally includes four phases: initiating, planning, executing, and closing. Some may also include a fifth "monitoring and controlling" phase between the executing and closing stages. By following each step, a project team increases the chance of achieving its goals...

#### 2.1 Information Gathering

In this phase, the key information about the project requirement is first collected from the owner or the user of the software. This is the most important phase.

#### 2.2 Feasibility Study

In this project, we present an Weather Forecast Management. Here we describe the architecture of this system and how it is used.

But now our system gives full opportunity to achieve this by modern methods. The employees that interface with this application-based system, he/she does their work more frequently—save valuable time for each consumer and Stock entry.

Our project gives frequent data searching for a particular entry. Our project is very user-friendly.

Software Feasibility has four solid dimensions:

TECHNOLOGY: Is a project technically feasible? Is it within the state of the art? Can defects be reduced to a level matching the application needs?

FINANCE: Is it financially feasible? Can development be completed at a cost the software organization, its client, or the market can afford?

TIME: Will the project time to market beat the competition?

RESOURCES: Does the organization have the resources needed to succeed?

# 2.3 Technical Feasibility

The assessment is based on an outline design of system requirements in terms of Input, Processes, Output, Fields, Programs, and Procedures. This can be quantified in terms of volumes of data, trends, frequency of updating, etc. to estimate whether the new system will perform adequately or not. Technological feasibility is carried out to determine whether the company has the capability, in terms of software, hardware, personnel, and expertise, to handle the completion of the project.

The technical issue usually raised during the feasibility stage includes:

- a. Does the necessary technology exists that you want to suggest?
- b. Are technical guarantees of accuracy, reliability case of access, and data security?

The computerized system follows as the technical points are affected by technical views. Our computerized system does not require any special type of technical requirement of the computer. The computerized system will work on any computer having some few requirements related to our system specified in the hardware.

#### 2.4 Financial feasibility

A financial feasibility study can focus on one particular project or area, or on a group of projects. However, for the purpose of establishing a business or attracting investors, you should include at least three key things in your comprehensive financial feasibility study:

Start-Up Capital Requirements,

Start-Up Capital Sources, and

Potential Returns for Investors.

A financial feasibility study projects how much start-up capital is needed, sources of capital, returns on investment, and other financial considerations. It looks at how much cash is needed, where it will come from, and how it will be spent.

Financial analysis is the most frequently used method for evaluating the effectiveness of a system. More commonly known as cost/benefit analysis, the procedure to determine the benefits and savings that are expected from a system, the labor expense is reduced. The cost of development of our system is very less. The cost of hardware and software for management is at present economical. The benefits in turn reduce a lot of manual paperwork. The development cost in the future will be putting the system on its extension.

It deals with the analysis that will be incurred while developing the system. At this stage, the initial investment is considered and returns from the same are also forecast. On the other hand, the organization calculates the payback period for the computerized system.

In our system, less staff is required and the time required gets decremented by a large scale.

Current trends in the hardware industry make it feasible for small to medium-scale industries to go for state-of-the-art machines at highly appreciable prices.

Software is also now available which supports highly sophisticated applications like export systems.

- 1. Cost-Based Study: It is important to identify cost and benefit factors, which can be categorized as follows: 1. Development costs; and 2. Operating costs. This is an analysis of the costs to be incurred in the system and the benefits derivable out of the system.
- 2. Time-Based Study: This is an analysis of the time required to achieve a return on investments. The benefits derived from the system. The future value of a project is also a factor.

## 2.5 Operational feasibility

The advantage of the system is that it reduces the tedious manual work and also the long times require achieving optimum results due to manual work. The

proposed system is feasible enough to operate. This developed system will be used for many years. The proposed system is beneficial only if it can be turned into an information system that will meet organization-operating requirements. This test of feasibility asks if the system will work when it is developed and installed. Are there major barriers to implementation?

A newcomer also handles the system after getting some guidelines. Hence the system is operationally feasible.

# 3. REQUIREMENT ANALYSIS

# 3 REQUIREMENT ANALYSIS

Requirements analysis, also called requirements engineering, is the process of determining user expectations for a new or modified product. These features, called requirements must be quantifiable, relevant, and detailed. In software engineering, such requirements are often called functional specifications.

# 3.1 Software/Hardware Requirement Specification

The introduction of the Software requirements specification states the goals and objectives of Software, describing it in the context of a computer-based system. Actually, the introduction may be nothing more than the Software scope of the planning document.

#### 3.2 Information Requirement

It provides a detailed description of the problem that the Software must solve. Information content, flow, and structure are documented. Software/Hardware, and Human Interfaces are described for external system elements and internal Software functions.

### 3.3 Functional Requirement

A description of each function require to solve the problem is presented in the functional description. A processing narrative is provided for each function, design constraints are stated and justified, performance characteristics are stated and one or more diagrams are included to graphically represent the overall structure of the Software and interplay among the Software functions and other system elements. The behavioral description section of the specification examines the operation of Software as a consequence of external events and internally generated control characteristics.

#### 3.4 Validation Requirement

A validation criterion is probably the most important and ironically, the most often neglected section of a Software requirement specification. How do we recognize successful implementation? What classes of tests must be conducted to validate the functions, performance, and constraints? We neglect this section because completing its demands through understanding Software requirements is something that we often do not have at this stage. Yet, the specification of validation criteria acts as an implicit review of all the requirements. It is essential that time and attention be given to this section.

#### 3.5 Implementation Sources

The whole software is implemented in PythonThe following tools are used for the purpose:-

#### Minimum Software Requirement

• Front End / Platform : Python(Django).

• Back End / DataBase : SQLite

• Operating System : Microsoft Win 7 above.

• Browser : Google Chrome, Mozilla Firefox, etc.

#### Minimum Hardware Requirement

• Processor : Intel i3 or above.

• RAM : 4 GB or above.

• Hard Disk Space : 128 GB or above.

#### 3.6 Platform

### • What is Python?

Python is a very popular general-purpose interpreted, interactive, object-oriented, and high-level programming language. Python is dynamically-typed and garbage-collected programming language. It was created by Guido van Rossum during 1985-1990. Like Perl, Python source code is also available under the GNU General Public License (GPL).

Python supports multiple programming paradigms, including Procedural, Object

Oriented and Functional programming language. Python design philosophy emphasizes code readability with the use of significant indentation.

This tutorial gives a complete understanding of Python programming language starting from basic conceopts to advanced concepts. This tutorial will take you through simple and practical approaches while learning Python Programming language.

- Python Jobs Today, Python is very high in demand and all the major companies are looking for great Python Programmers to develop websites, software components, and applications or to work with Data Science, AI, and ML technologies. When we are developing this tutorial in 2022, there is a high shortage of Python Programmers where as market demands more number of Python Programmers due to it's application in Machine Learning, Artificial Intelligence etc. Today a Python Programmer with 3-5 years of experience is asking for around 150,000 dollar annual package and this is the most demanding programming language in America. Though it can vary depending on the location of the Job. It's impossible to list all of the companies using Python, to name a few big companies:
- Google
- Intel
- NASA
- PayPal
- Facebook
- IBM
- Amazon
- Netflix
- Pinterest
- Uber
- Many more...

So, you could be the next potential employee for any of these major companies. We have developed a great learning material for you to learn Python Programming which will help you prepare for the technical interviews and certification exams based on Python. So, start learning Python using this simple and effective tutorial from anywhere and anytime absolutely at your pace

# • Why to Learn Python?

Python is consistently rated as one of the world's most popular programming languages. Python is fairly easy to learn, so if you are starting to learn any programming language then Python could be your great choice. Today various Schools, Colleges and Universities are teaching Python as their primary programming language. There are many other good reasons which makes Python as the top choice of any programmer:

- Python is Open Source which means its available free of cost
- Python is simple and so easy to learn
- Python is versatile and can be used to create many different things
- Python has powerful development libraries include AI, ML etc.
- Python is much in demand and ensures high salary
- Python: is a MUST for students and working professionals to become a great Software Engineer specially when they are working in Web Development Domain. I will list down some of the key advantages of learning Python:
- Python is Interpreted: Python is processed at runtime by the interpreter. You do not need to compile your program before executing it. This is similar to PERL and PHP.
- Python is Interactive: You can actually sit at a Python prompt and interact with the interpreter directly to write your programs.
- Python is Object-Oriented: Python supports Object-Oriented style or technique of programming that encapsulates code within objects.
- Python is a Beginner's Language: Python is a great language for the beginner-level programmers and supports the development of a wide range of applications from simple text processing to WWW browsers to games.

# • Python Online Compiler/Interpreter

We have provided Python Online Compiler/Interpreter which helps you to Edit and Execute the code directly from your browser. Try to click the icon run button to run the following Python code to print conventional "Hello, World!".

Below code box allows you to change the value of the code. Try to change the value inside print() and run it again to verify the result.

This is my first Python program.

This will print 'Hello, World!' as the output print ("Hello, World!");

- Careers with Python If you know Python nicely, then you have a great career ahead. Here are just a few of the career options where Python is a key skill:
- Game developer
- Web designer
- designer
- Python developer
- designer
- Python developer
- Full-stack developer
- Machine learning engineer
- Data scientist
- Data analyst
- Data engineer
- DevOps engineer
- Software engineer
- Many more other roles

#### • Characteristics of Python:

Following are important characteristics of Python Programming

It supports functional and structured programming methods as well as OOP.

It can be used as a scripting language or can be compiled to byte-code for building large applications.

It provides very high-level dynamic data types and supports dynamic type checking.

It supports automatic garbage collection.

It can be easily integrated with C, C++, COM, ActiveX, CORBA, and Java.

# Applications of Python :

The latest release of Python is 3.x. As mentioned before, Python is one of the most widely used language over the web. I'm going to list few of them here:

• Easy to learn: Python has few keywords, simple structure, and a clearly defined syntax. This allows the student to pick up the language quickly.

- Easy to read: Python code is more clearly defined and visible to the eyes. Easy-to-maintain: Python's source code is fairly easy-to-maintain. A broad standard library Python's bulk of the library is very portable and cross-platform compatible on UNIX, Windows, and Macintosh.
- Interactive Mode: Python has support for an interactive mode which allows interactive testing and debugging of snippets of code.
- Portable: Python can run on a wide variety of hardware platforms and has the same interface on all platforms.
- Extendable You can add low-level modules to the Python interpreter. These modules enable programmers to add to or customize their tools to be more efficient.
- Databases: Python provides interfaces to all major commercial databases.
- GUI Programming: Python supports GUI applications that can be created and ported to many system calls, libraries and windows systems, such as Windows MFC, Macintosh, and the X Window system of Unix.
- Scalable: Python provides a better structure and support for large programs than shell scripting.

#### 3.7 Process Model Used

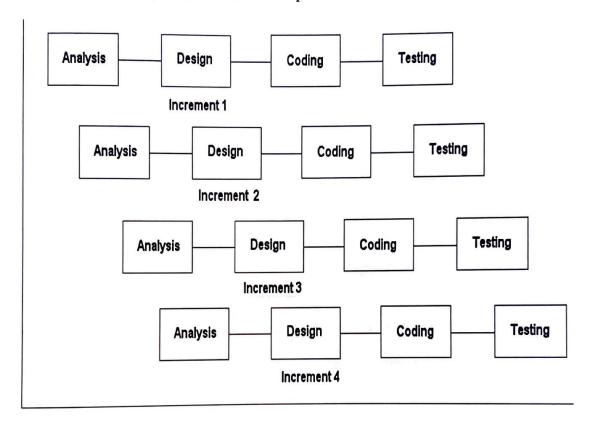
To solve actual problems in an industry setting, a software engineer or a team of engineers must incorporate a development strategy that encompasses the process, methods, and tools, layers. A process model for software engineering based on the nature of the project and application.

# 3.8 The Incremental Model

This model is based upon the recognition that software is built from smaller components. It tries to rationalize this too often however it can lead to 'PATCH AND FIX' methods. This incremental model is an evolutionary software process model, which is iterative in nature. It combines elements of a linear sequential model with the iterative philosophy of prototyping.

In this approach, each increment produces a deliverable version of the software. During this increment, there are four phases viz. requirement analysis, design, coding, and testing. At the end of these phases the complete "Performance Monitoring and Alert Management System" was developed.

The incremental Model's next iteration will have all these phases but the software development will aim towards adding features like support for multiple servers on the network and Linux support. This is how the incremental approach is used for the development of evolving software i.e. Layer after Layer approach is chosen to achieve the required features in our final product.



#### Calendar Time

Figure 1: Incremental Model

#### 3.9 Functional Modeling

Functional Modelling gives the process perspective of the object-oriented analysis model and an overview of what the system is supposed to do. It defines the function of the internal processes in the system with the aid of Data Flow Diagrams (DFDs). It depicts the functional derivation of the data values without indicating how they are derived when they are computed, or why they need to be computed.

#### 3.9.1 Data Flow Diagram

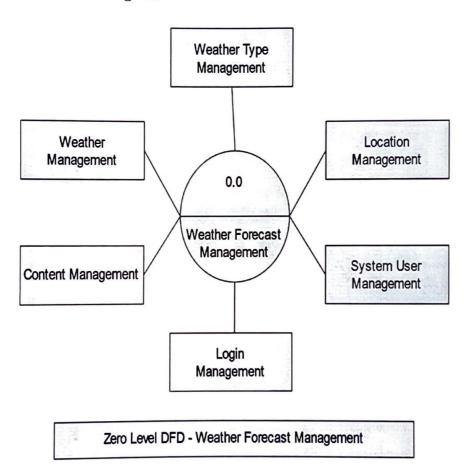


Figure 2: Data Flow Diagram 0

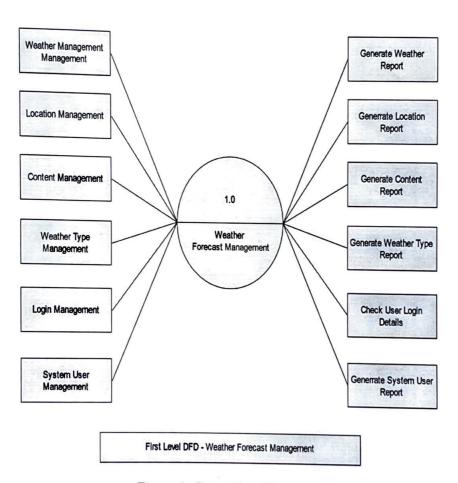


Figure 3: Data Flow Diagram 1

# 3.10 Data Modeling - Entity Relation Diagram

Entity Relationship Diagram, also known as ERD is a diagram that displays the relationship of entity sets stored in a database. In other words, ER diagrams help to explain the logical structure of databases. ER diagrams are created based on three basic concepts: entities, attributes, and relationships.

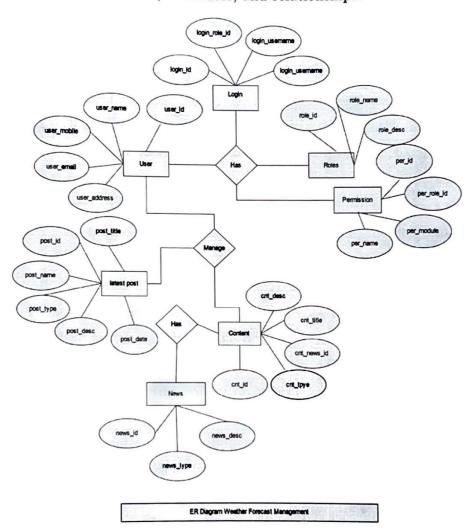


Figure 4: Entity Relation Diagram

## 4. DESIGN AND UML MODELING

#### 4 DESIGN AND UML MODELING

#### 4.1 Introduction

A Unified Modeling Language (UML) diagram provides a visual representation of an aspect of a system. UML diagrams illustrate the quantifiable aspects of a system that can be de-scribed visually, such as relationships, behavior, structure, and functionality. For example, a class diagram describes the structure of the system or the details of an implementation, while a sequence diagram shows the interaction between objects over time. In a UML diagram, the diagram elements visually represent the classifiers in a system or application. These classifiers are the diagrammatic representation of a source element. UML diagrams provide views of source elements; however, diagram elements do not have semantic value. UML diagrams can help system architects and developers understand, collab- orate on, and develop an application. High-level architects and managers can use UML diagrams to visualize an entire system or project and separate applications into smaller components for development. System developers can use UML diagrams to specify, visualize, and document applications, which can increase efficiency and improve their application design. UML diagrams can also help identify patterns of behavior, which can provide opportunities for reuse and streamlined applications. The visual representation of a system that UML diagrams provide can offer both low-level and high-level insight into the concept and design of an application. You can use a wide variety of diagram types to model a system or application, based on the system, audience, and detail of the model you create. Depending on the diagram choice, you can select the detail and level of abstraction that the diagrams display. A typical UML model can consist of many different types of diagrams, with each diagram presenting a different view of the system that you are modeling. Some examples of UML 2.1 and later diagrams include use case diagrams, state diagrams, sequence and communication diagrams, and topic and browse diagrams. Some UML 2.1 and later diagrams also allow the use of freeform and non-UML shapes

#### 4.2 Use case Diagram

As the most known diagram type of the behavioral UML types, Use case diagrams give a graphic overview of the actors involved in a system, different functions needed by those actors and how these different functions interact. It's a great starting point for any project discussion because you can easily identify the main actors involved and the main processes of the system. You can create use case diagrams using our tool and/or get started instantly using our use case templates

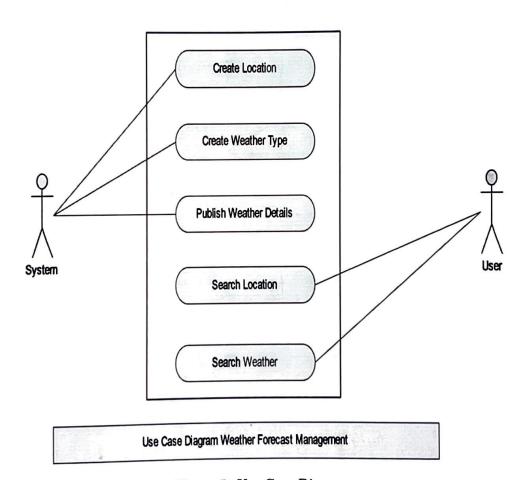


Figure 5: Use Case Diagram

#### 4.3 Activity Diagram

Activity diagrams represent workflows in a graphical way. They can be used to describe the business workflow or the operational workflow of any component in a system. Sometimes activity diagrams are used as an alternative to State machine diagrams. Check out this wiki article to learn about symbols and usage of activity diagrams.

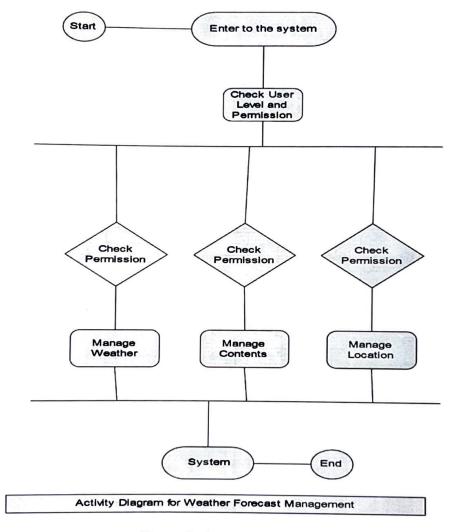


Figure 6: Activity Diagram

#### 4.4 Class Diagram

Class diagrams are the main building block of any object-oriented solution. It shows the classes in a system, the attributes, and operations of each class and the relationship between each class. In most modeling tools, a class has three parts. Name at the top, attributes in the middle and operations or methods at the bottom. In a large system with many related classes, classes are grouped together to create class diagrams. Different relationships between classes are shown by different types of arrows.

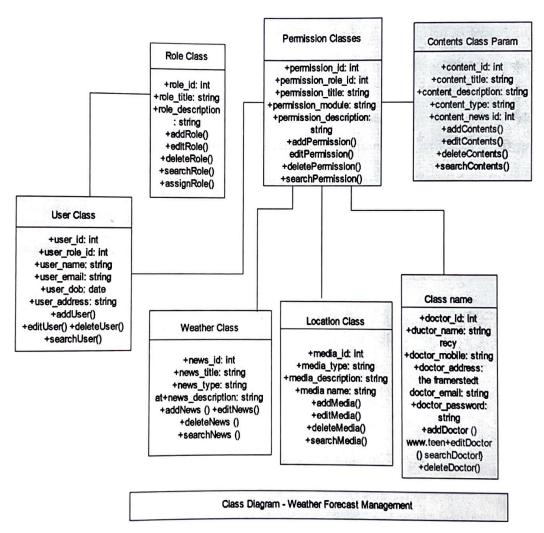


Figure 7: Class Diagram

# 5. TEST TOOLS PROPOSED FOR USE

#### 5 TEST TOOLS PROPOSED FOR USE

#### 5.1 Black-Box Testing

Black box testing treats the software as a "black box," without any knowledge of the internal implementation.

Black box testing also mainly refers to functional testing because this testing method emphasized executing the functions and examination of their input and output data.

The tester treats the software under test as a black box because only the inputs, outputs, and specifications are visible, and the functionality is determined by observing the outputs to corresponding inputs.

Its aim is to:

Demonstrate that the software function is operational.

Live data input is properly accepted.

The required output is produced.

The integrity of the table is maintained.

#### 5.2 White-Box Testing

White box testing, by contrast to black box testing, is when the tester has access to the internal data structures and algorithms (and the code that implements these) Software is viewed as a white box, or glass box in white-box testing, as the structure and flow of the software under test are visible to the tester.

It requires programming skills to identify all paths through the software. The tester chooses test case inputs to exercise paths through the code and determines the appropriate outputs.

Since the tests are based on the actual implementation, if the implementation

changes, the tests probably will need to change too. It aims to guarantee all the independent paths within the modules have been exercised at least once.

#### 5.3 Validation Testing

Valid data must be input to the database for accurate valid output. Forex valid data is following

- No duplicate Account Number is stored in the database. i.e one Account has an only one Id.
- The names are checked for the proper inputs i.e. no special symbols (@,,, etc.) are accidentally input to the system i.e. only alphabets for the name.
- The amount telephone numbers are checked for proper inputs i.e. only numeric no alphabet.

# 6. FORM DESIGN AND CODING

# 6 FORM DESIGN AND CODING

#### 6.1 Snapshot



Figure 8: Home Page



Figure 9: Result Page

#### 6.2 Data Base Schema

A database schema defines how data is organized within a relational database; this is inclusive of logical constraints such as table names, fields, data types, and the relationships between these entities. Schema commonly uses visual representations to communicate the architecture of the database, becoming the foundation for an organization's data management discipline. This process of database s schema design is also known as data modeling

Table 1:  $django_m igrations Table$ .  $django_{m}igrationsTable$ Not PK Al Check U Default Name Type integer 10 varchar (255) v app varchar (255) v name applied datetime

Table 2:  $django_{c}ontent_{t}ypeTable$ .

Name	Type Not PK Al U	Default Check
d	integer $\vee$ $\square$ $\square$	
app_label	varchar (100) ∨ ☑ □ □ □	
model	varchar (100) ∨ ☑ □ □	

# 7. CONCLUSION & FUTURE SCOPE

#### 7 CONCLUSION & FUTURE SCOPE

#### 7.1 Conclusion

In conclusion, the development of a weather forecast management system using Python can greatly benefit various industries and individuals who rely on weather predictions. With the help of Python's data manipulation and analysis libraries, such as Pandas and NumPy, weather data can be collected, processed, and analyzed efficiently. Additionally, Python's data visualization libraries, such as Matplotlib and Seaborn, can be used to create graphs and plots that provide a clear understanding of weather trends.

By combining the power of Python with various weather APIs, such as Open-WeatherMap or Dark Sky, real-time weather data can be accessed and used to make accurate predictions. Machine learning algorithms can also be implemented using Python to improve the accuracy of weather forecasts by analyzing historical weather data and identifying patterns.

Overall, the development of a weather forecast management system using Python can provide valuable insights into weather patterns and help individuals and businesses make informed decisions based on accurate weather predictions.

#### 7.2 Future Scope

The future scope of a weather forecast management system using Python is vast and promising. Here are some potential areas of development-

• Integration with IoT devices: With the increasing popularity of IoT devices, it is possible to collect real-time weather data from sensors placed across vari-

ous locations. By integrating these sensors with a weather forecast management system developed using Python, it will be possible to provide more accurate and localized weather predictions.

- Improved machine learning algorithms: Machine learning algorithms can be further improved to analyze larger datasets and provide more accurate weather predictions. The use of deep learning algorithms can also be explored to improve the accuracy of weather forecasting.
- Integration with other data sources: Weather data can be further enhanced by integrating it with other data sources such as satellite imagery, social media data, and traffic data. This can provide a more comprehensive understanding of weather patterns and their impact on various industries.
- Integration with other systems: Weather forecast management systems can be integrated with other systems such as transportation management systems, energy management systems, and agricultural management systems. This can provide valuable insights into weather patterns and help optimize decision-making in various industries.
- Personalized weather forecasting: With the help of machine learning algorithms, it is possible to provide personalized weather forecasting to individuals based on their location, preferences, and behavior patterns. This can help individuals plan their day better and take appropriate measures to prepare for adverse weather conditions.

In conclusion, the future scope of a weather forecast management system using Python is vast, and its potential benefits are significant. With the continuous development of technology and the increasing demand for accurate weather predictions, the scope for further research and development in this area is enormous

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- [5] https://weatherstack.com/documentation/
- [6] https://requests.readthedocs.io/en/latest/