MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Final Year Internship Report

On

Web Development

Submitted By:

Ayush Rathore

0901CS181024

Faculty Mentor:

Prof. Jaimala Jha

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE

GWALIOR - 474005 (MP) est. 1957

MAY-JUNE 2022

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Final Year Internship Report

An internship report submitted in partial fulfilment of the requirement for the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

Submitted By:

Ayush Rathore

0901CS181024

Faculty Mentor:

Prof. Jaimala Jha

Submitted to:

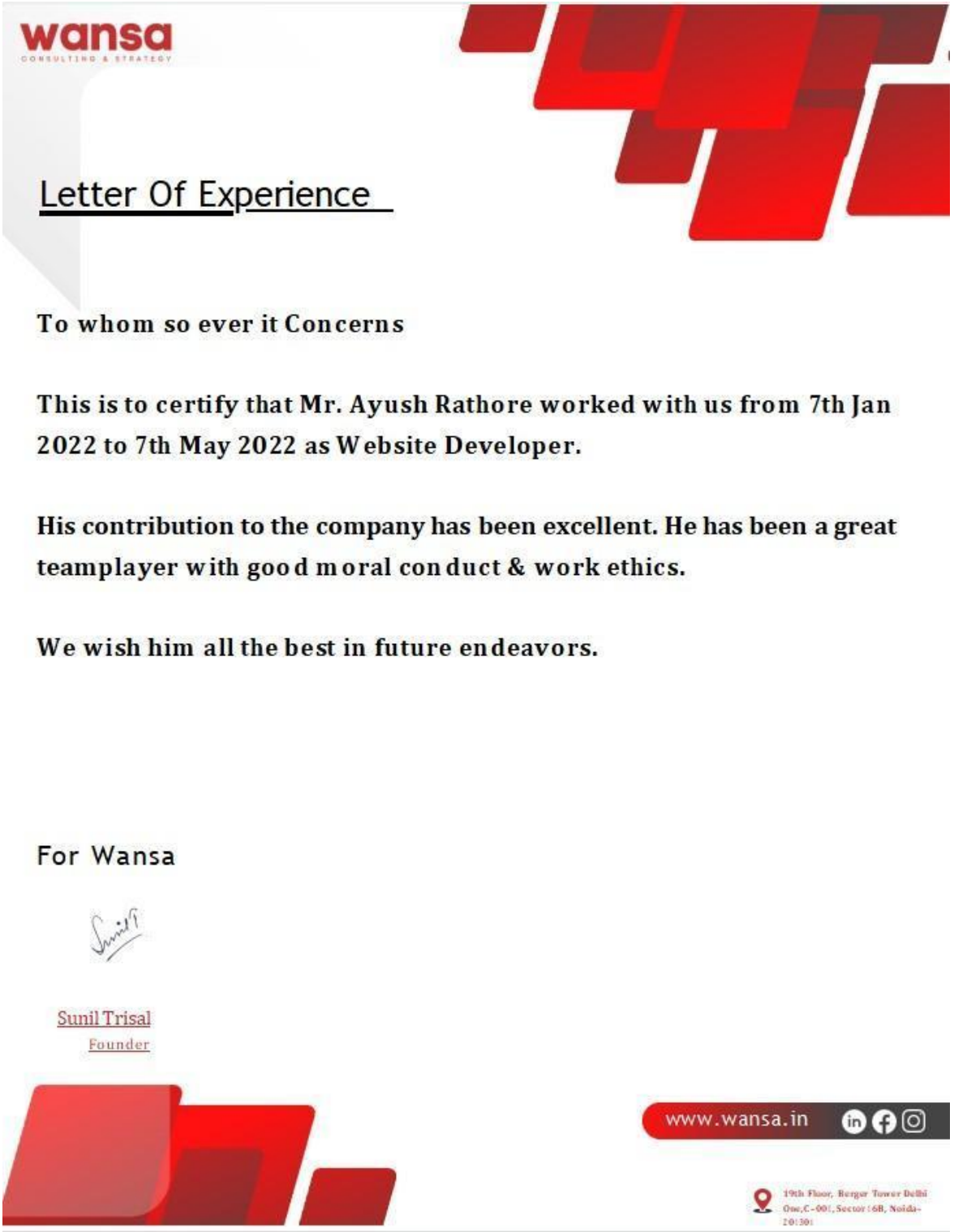
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE

GWALIOR - 474005 (MP) est. 1957

MAY-JUNE 2022

Internship Certificate Received from **Wansa**



wansa
CONSULTING & STRATEGY

Letter Of Experience

To whom so ever it Concerns

This is to certify that Mr. Ayush Rathore worked with us from 7th Jan 2022 to 7th May 2022 as Website Developer.

His contribution to the company has been excellent. He has been a great teamplayer with good moral conduct & work ethics.

We wish him all the best in future endeavors.

For Wansa

Sunil Trisal
Founder

www.wansa.in

19th Floor, Berger Tower Delhi One,C-001, Sector 16B, Noida-201301

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

CERTIFICATE

This is certified that **Ayush Rathore 0901CS181024** has submitted the Internship report of the work he has done under the mentorship of **Prof. Jaimala Jha**, in partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering from Madhav Institute of Technology and Science, Gwalior.

Prof Jaimala Jha
Faculty Mentor
Computer Science & Engineering

Dr. Manish Dixit
Professor & Head
Computer Science & Engineering

Dr. Manish Dixit
Professor & HOD
Department of CSE
M.I.T.S. Gwalior

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

DECLARATION

I hereby declare that the work being presented in this Internship report, for the partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in CSE at Madhav Institute of Technology & Science, Gwalior is an authenticated and original record of my work under the mentorship of **Prof Jaimala Jha,** Department of CSE.

I declare that I have not submitted the matter embodied in this report for the award of any degree or diploma anywhere else.

Ayush Rathore
0901CS181024
IV Year
Computer Science & Engineering

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

ACKNOWLEDGEMENT

The full-semester internship has proved to be pivotal to my career. I am thankful to my institute, **Madhav Institute of Technology and Science** to allow me to continue my disciplinary/interdisciplinary internship as a curriculum requirement, under the provisions of the Flexible Curriculum Scheme (based on the AICTE Model Curriculum 2018), approved by the Academic Council of the institute. I extend my gratitude to the Director of the institute, **Dr. R. K. Pandit,** and the Dean Academics, **Dr. Manjaree Pandit** for this.

I would sincerely like to thank my department, the **Department of Computer Science and Engineering, for allowing** me to explore this internship. I humbly thank **Dr. Manish Dixit**, Professor, and Head of the Department of Computer Science and Engineering, for his continued support during the course of this engagement, which eased the process and formalities involved.

I am sincerely thankful to my faculty mentors. I am grateful to the guidance of **Prof Jaimala Jha**, Department of Computer Science and Engineering, for his continued support and close mentoring throughout the internship. I am also very thankful to the faculty and staff of the department.

Ayush Rathore

0901CS181024

IV Year

Computer Science & Engineering

ABSTRACT

This internship report describes my work for the organization named Wansa.

I have done mainly three projects which were developed for the official website of Wansa. These three projects required various tools and technologies which gave me a lot of experience. I have learned the technologies and applied them at the same time. I have worked on both the frontend and backend.

About the Organization:

This Internship is a Web Development Internship provided by Wansa. Its mission is to be a growth catalyst for startups MSMEs and SMEs by offering solutions through offline, and digital, technology & resolving their problems in Reach, Visibility, Sales & Revenue.

The objective of the Proposed Work:

The objective of our project is to provide a better user platform to users or the people who came to the website for service-related query or onboarding purposes. We surely provide some basic functionalities and more good options to improve the experience for users.

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Chapter 1

Introduction

1.1 Objective

The objective of our project is to provide a better user platform to users or the people who came to the website for service-related queries or onboarding purposes.

We surely provide some basic functionalities and more good options to improve the experience for users.

1.2 Scope

The scope of the project is vast. We can build an android app, so the user can easily access the website by phone through the app. We can make some improvements to the website so the user can easily use it and increase the latency. We can add some more features based on the requirements needed in the future.

1.3 About the Project

I have worked on three projects in my four months of Internship.

1. **Wansa Homepage-**

   This is the frontend-only website with different tabs and a question scroller created using ReactJS for the frontend and Axios for sending data through API.

2. **Wansa Dashboard-**

   This is a website that shows the information on the dashboard processed in the backend created using HTML, CSS, JavaScript, Bootstrap for the Frontend and Django for the backend, also Django REST Framework was used for sending and receiving data through Api from various other projects.

3. **Wansa Chatbot Webapp-**

   This chatbot app was created using ReactJs for the UI designing Reactchatbotapp for the functionality.

Chapter 2

System Requirement

2.1 Information Gathering

We have gathered a lot of information from our side. We have checked the existing website and their features.
The first and foremost method for gathering and managing our project information was to organize team meetings. Conducting meetings daily with my project team makes this more simple.

2.2 System Feasibility

Feasibility study of the system is a very important state during system design. Fea- sibility study is a test of a system proposal according to its workability impact on the organization, ability to meet user needs, and use of resources. A feasibility study decides whether the system is properly developed or not.

2.3 Software implementation language/technology

For FrontEnd

The Technologies are:

1. **ReactJS**: ReactJS is a **declarative**, **efficient**, and flexible **JavaScript library** for building reusable UI components. It is an open-source, component-based front-end library that is responsible only for the view layer of the application. It was initially developed and maintained by Facebook and later used in its products like WhatsApp & Instagram. The main objective of ReactJS is to develop User Interfaces (UI) that improve the speed of the apps. It uses virtual DOM (JavaScript object), which improves the performance of the app. The JavaScript virtual DOM is faster than the regular DOM. We can use ReactJS on the client and server side as well as with other frameworks. It uses component and data patterns that improve readability and helps to maintain larger apps.

2. **HTML**: Hypertext Mark-up Language (HTML) is the standard mark-up language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web. Web browsers receive HTML documents from a web server or from local storage and render them into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

3. **CSS**: Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language. Although most often used to set the visual style of web pages and customer interfaces written in HTML and XHTML, the language can be applied to any XML document, including plain XML, SVG, and XUL, and is applicable to rendering in speech, or on other media.

4. **Bootstrap**: Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains HTML, CSS, and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.

For BackEnd

The Technologies are

1. **Django**: Django is a Python-based web framework that allows you to quickly create efficient web applications. It is also called batteries included framework because Django provides built-in features for everything including Django Admin Interface, default database – SQLlite3, etc. When you're building a website, you always need a similar set of components: a way to handle user authentication (signing up, signing in, signing out), a management panel for your website, forms, a way to upload files, etc. Django gives you ready-made components to use and that too for rapid development.

2. **SOLlite3**: SQLite is an in-process library that implements a self-contained, serverless, zero-configuration, transactional SQL database engine. It is a database, which is zero-configured, which means like other databases you do not need to configure it in your system. SQLite engine is not a standalone process like other databases, you can link it statically or dynamically as per your requirement with your application. SQLite accesses its storage files directly

Chapter 3

System Analysis

3.1 Information Flow Representation

The flow diagram is a collective term for a diagram representing a flow or set of dynamic relationships in a system. The term flow diagram is also used as a synonym of the flowchart, and sometimes as the counterpart of the flowchart. A system Flow Diagram is basically a graphical and sequential representation of the major steps involved in a systematic process. A SFD (System Flow Diagram) shows what kind of information will be input to and output from the system, where the data will come from and go to, and where the data will be stored.

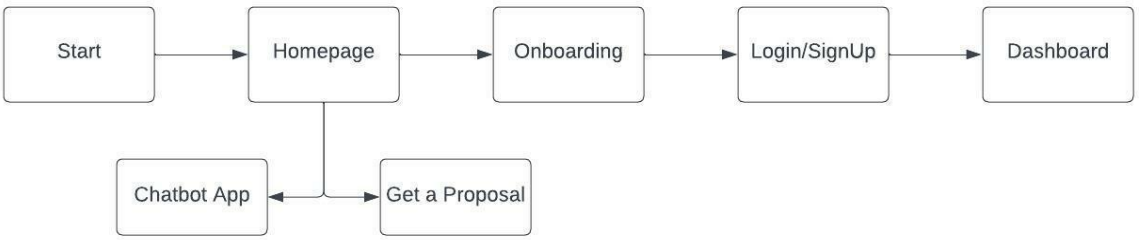


Figure1. UML Sequence Diagram

Chapter 4

System Design

4.1 Architectural Design

Describe the Architectural design for your project. The software needs the architectural design to represent the design of the software. IEEE defines architectural design as “the process of defining a collection of hardware and software components and their interfaces to establish the framework for the development of a computer system.” The software that is built for computer-based systems can exhibit one of these many architectural styles.

4.2 Modules used

Describe various modules/procedures of your project-specific system.
The main modules of the project are:

- Home Page:- This is the page where a user got taken to on opening the website
- Get a Proposal:- On this proposal page, several questions are asked. On clicking next scroll from one question to another.
- Sign up or onboarding:- In this user can sign up and can able to feed details in the database like username, email, password, etc
- Login:- From this user can log in to the website by username and password or email and OTP.
- Dashboard:- This is the page where the user will get redirected after login. Here he will see the cards that contain some short information and Graphs which are showing stats

- Chatbot:- Here a user can ask his query and get a preset reply according to the question user asked.

4.3.1 Internal Data Structures

Data Structure used in our website :

List : Lists are just like dynamically sized arrays, declared in other languages (vector in C++ and ArrayList in Java). Lists need not be homogeneous always which makes it the most powerful tool in Python. A single list may contain DataTypes like Integers, Strings, as well as Objects. Lists are mutable, and hence, they can be altered even after their creation.

Dictionary: Dictionary in Python is an unordered collection of data values, used to store data values like a map, which, unlike other Data Types that hold only a single value as an element, Dictionary holds the key: value pair. Key-value is provided in the dictionary to make it more optimized.

4.3 Interface Design

User Interface in our project :

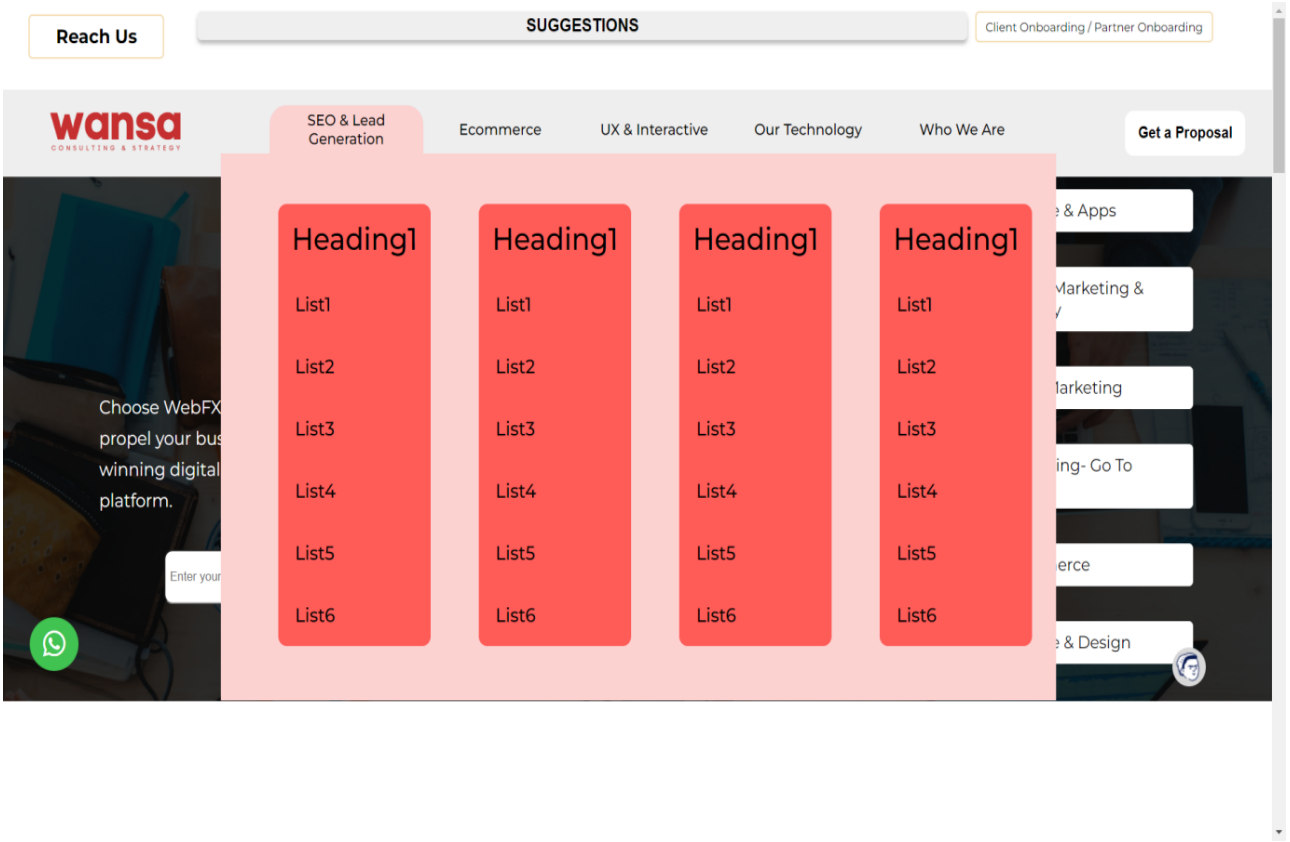


Figure2.Home Page

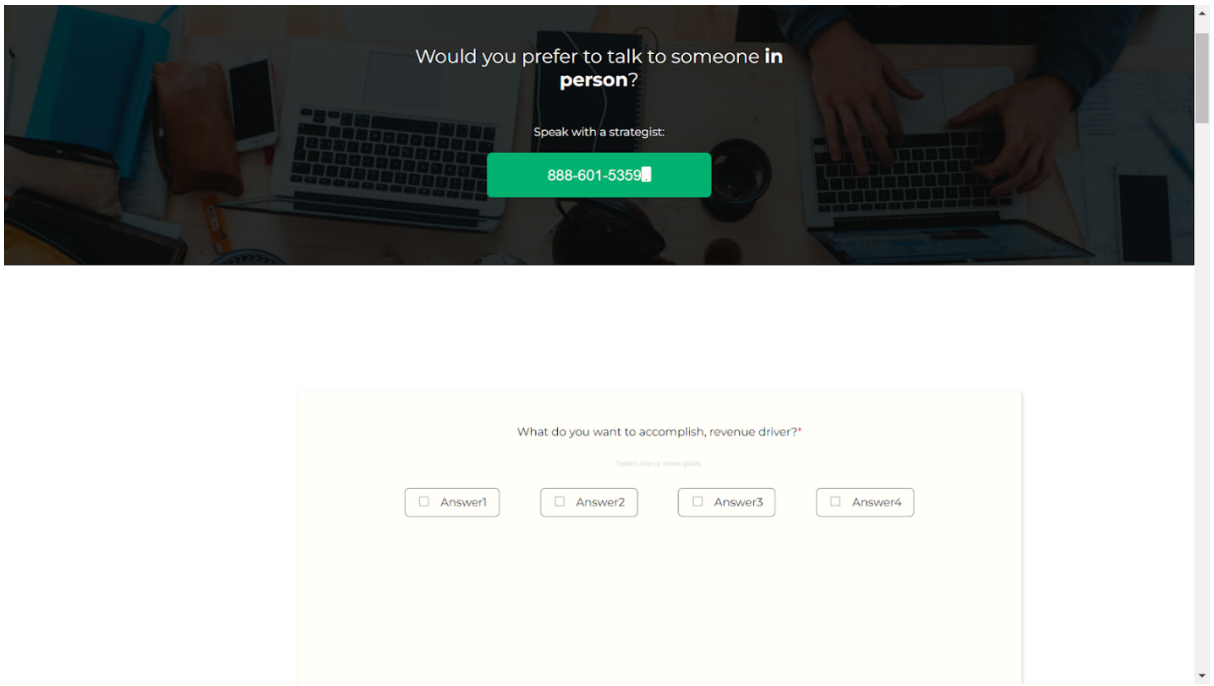


Figure3. Proposal Page

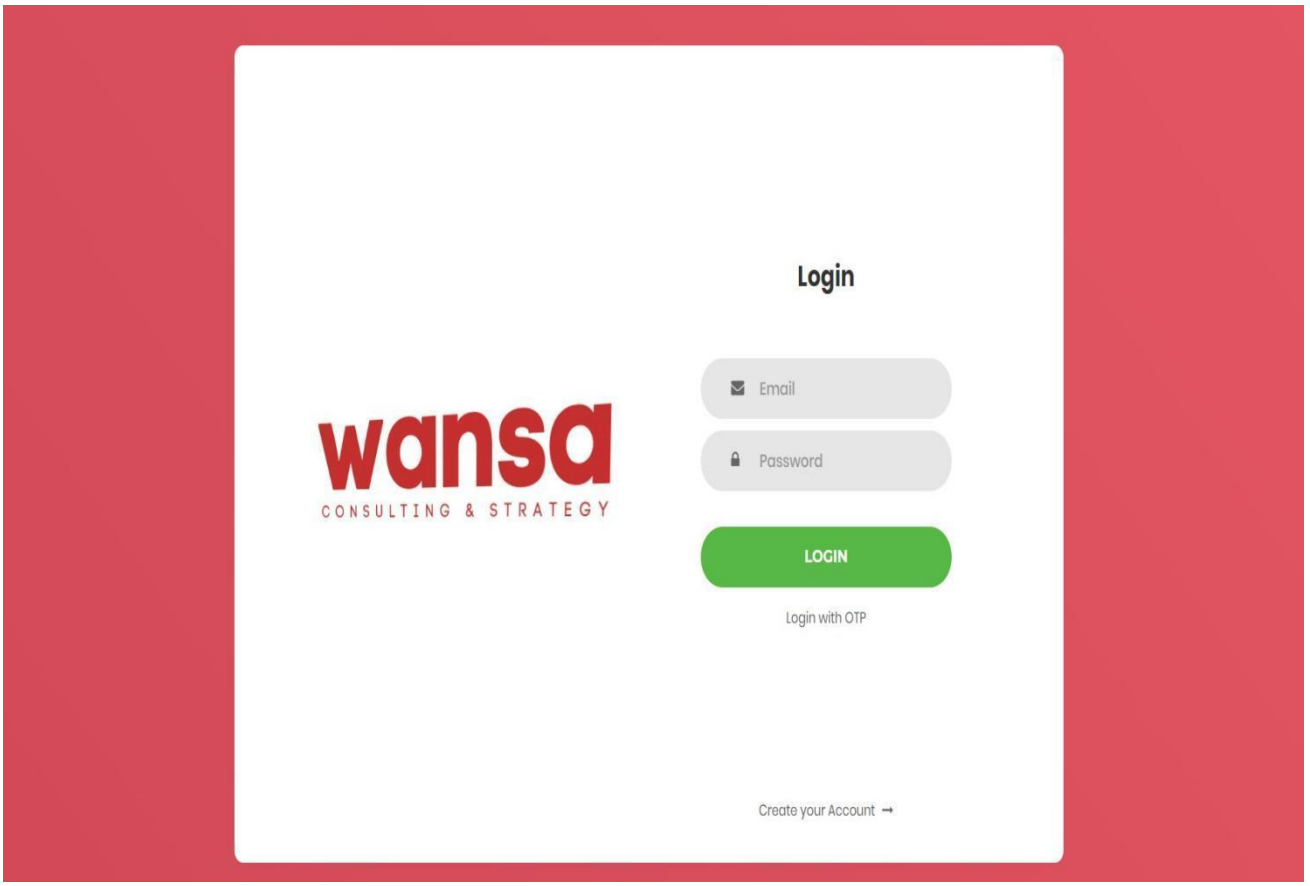


Figure4.Login Page

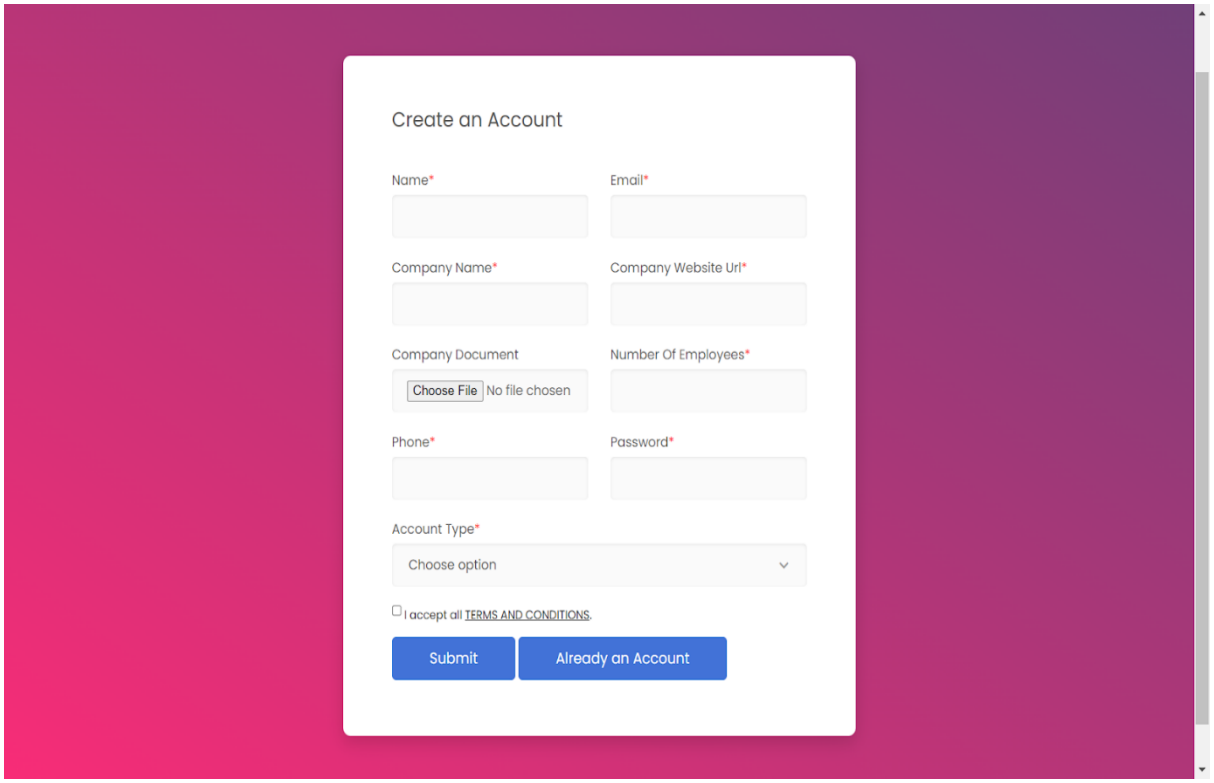


Figure5. SignUp Page

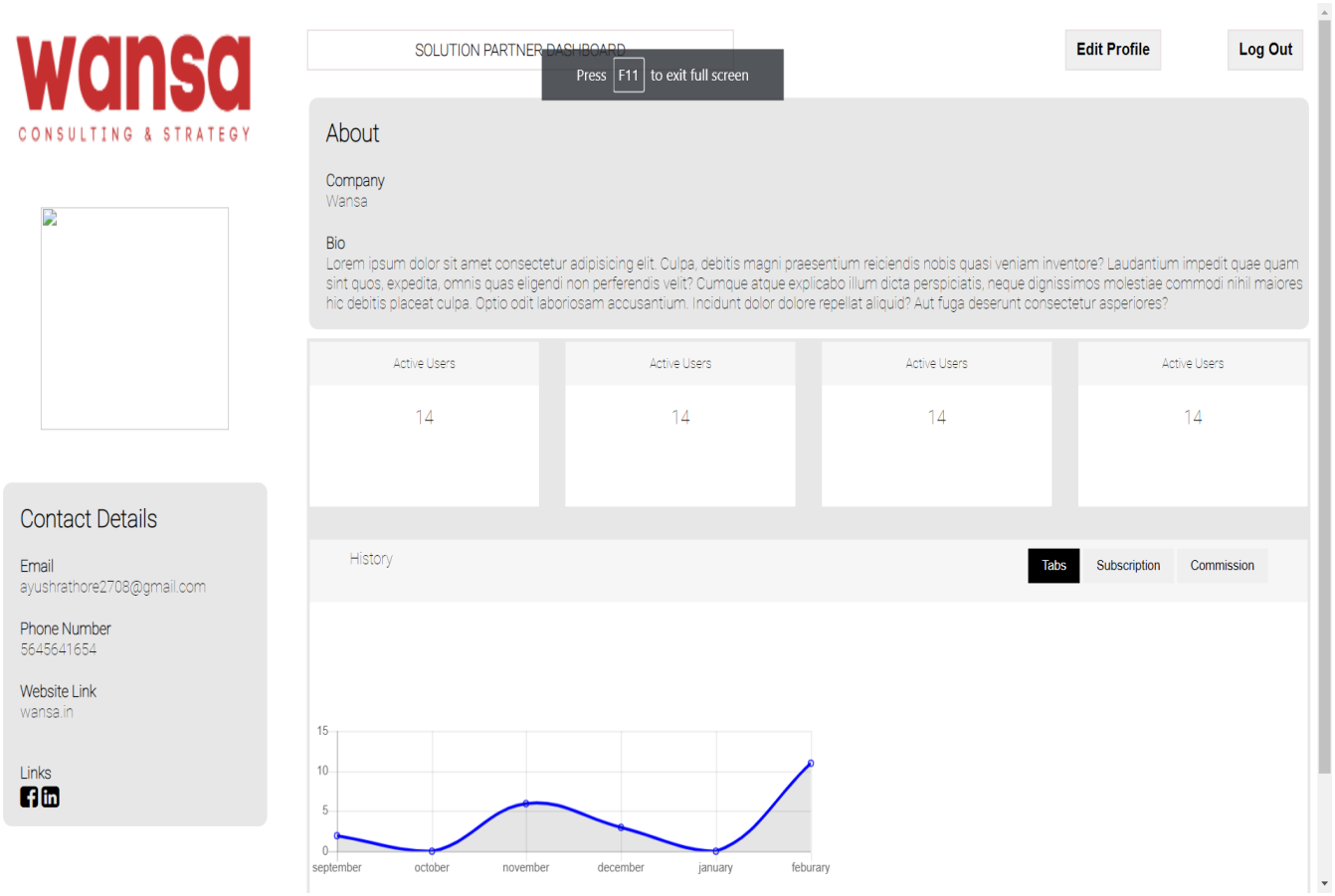


Figure 6.Dashboard

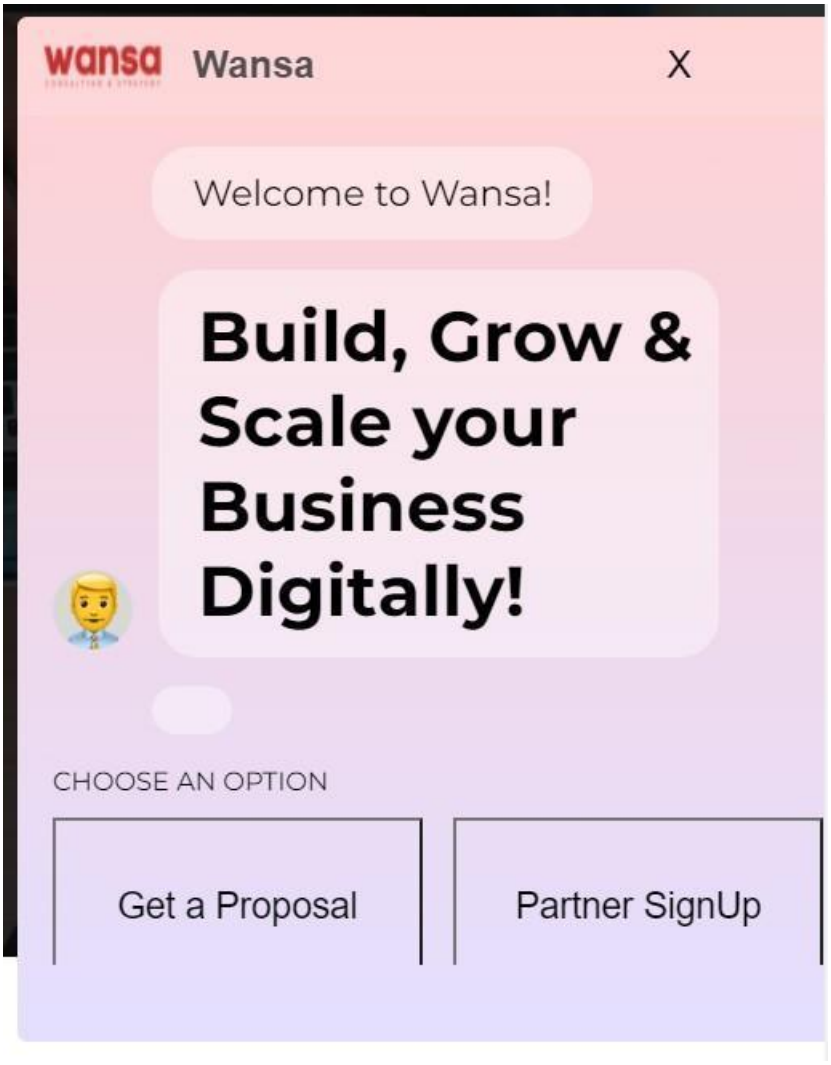


Figure7.Chatbot

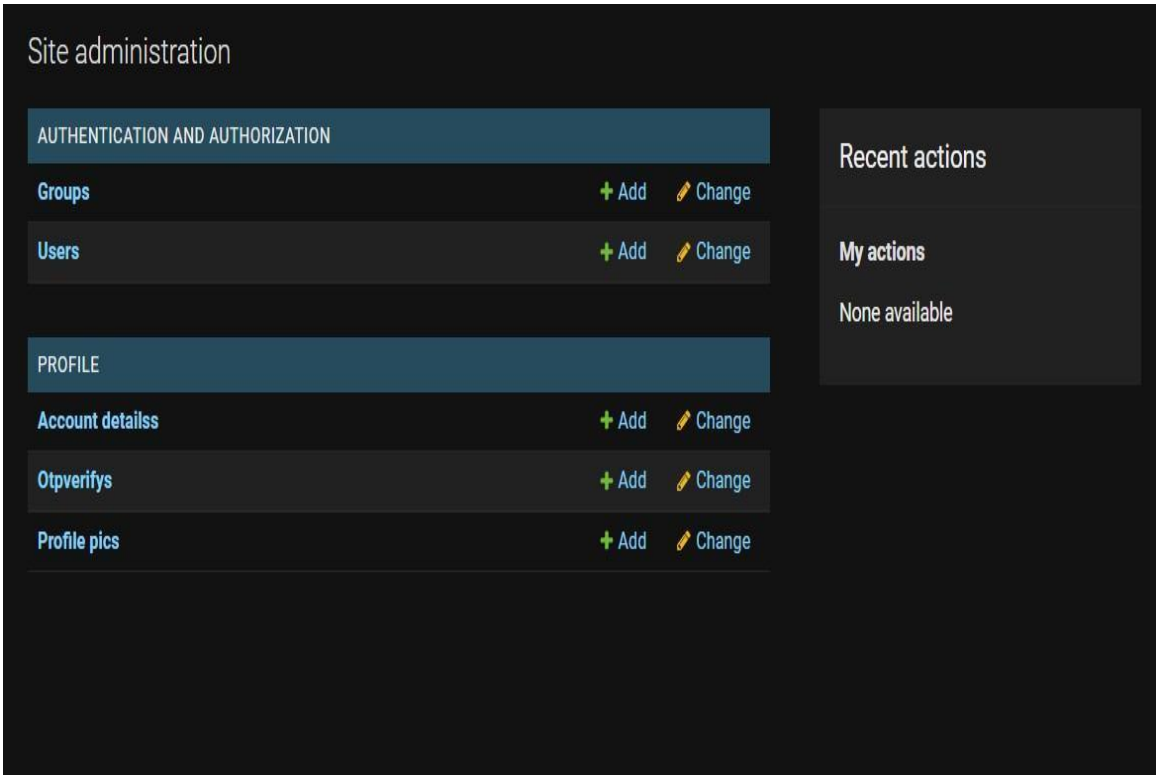


Figure 8. Site Administrations

Chapter 5

IMPLEMENTATION AND TESTING

5.1 Implementation

1) Requirements

Recommended System Requirements:

- A good CPU and a GPU with atleast 2GB of memory.
- At least 2GB of RAM.
- Active internet connection so that the system can access the online resources through links.

Recommended Software Requirements:

- Visual Studio Code

Required Libraries for this project along with their version numbers used while mak- ing and testing this project:

- React - 17.0.2
- React-chatbot-kit - 2.0.1
- Django - 3.2.11
- Django-Heroku - 0.3.1

- Pillow - 9.0.1
- Whitenoise - 5.3.0
- Dj-database-url - 0.5.0
- Gunicorn - 20.1.0

5.2 Tools used

Tools for the project -

1. **VS Code**: Visual Studio Code, also commonly referred to as VS Code, is a source-code editor made by Microsoft for Windows, Linux, and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git.

2. **GitHub**: GitHub, Inc. is a provider of Internet hosting for software development and version control using Git. It offers the distributed version control and source code management (SCM) functionality of Git, plus its own features. It provides access control and several collaboration features such as bug tracking, feature requests, task management, continuous integration, and wikis for every project.

3. **Netlify:** Netlify is one of the most amazing web development platforms which is meant to multiply your productivity in the best possible way. The platform helps developers to build, test, and deploy websites. By unifying the modern decoupled web elements from local development processes to advanced logic, Netlify is offering an amazingly faster way to ensure much more performant, scalable, and secure websites and applications.

4. **Heroku:** It is a cloud-based application deployment and management service. Heroku works on the container-based design system and these smart containers are known as dynos. It runs applications inside various dynos and each dyno is separated from the other.

5.3 Description of main modules

The main modules of the project are:

- **Home Page:-** This is the page where a user got taken to on opening the website
- **Get a Proposal:-** On this proposal page, several questions are asked. On clicking next scroll from one question to another.
- **Sign up or onboarding:-** In this user can sign up and can able to feed details in the database like username, email, password, etc
- **Login:-** From this user can log in to the website by username and password or email and otp.
- **Dashboard:-** This is the page where the user will get redirected after login. Here he will see the cards that contain some short information and Graphs which are showing stats
- **Chatbot:-** Here a user can ask his query and get a preset reply according to the question user asked.

5.4 Testing

1. **Testing objective:-**

Software testing is the process of executing a program or application with the intent of finding the software bugs. It can also be stated as the process of validating and verifying that a software program or application or product: Meets the business and technical requirements that guided its design and development Works as expected Can be implemented with the same characteristic.

2. **Testing scope:-**

1) Process: Testing is a process rather than a single activity.

2) All Life Cycle Activities: Testing is a process that takes place throughout the Software Development Life Cycle (SDLC). The process of designing tests early in the life cycle can help to prevent defects from being introduced in the code. Sometimes it's referred to as "verifying the test basis via the test design". The test basis includes documents such as the requirements and design specifications.

3) Planning: We need to plan what we want to do. We control the test activities, and we report on testing progress and the status of the software under test.

4) Preparation: We need to choose what testing we will do, by selecting test conditions and designing test cases.

5) Evaluation: During the evaluation, we must check the results and evaluate the software under test and the completion criteria, which helps us decide whether we have finished testing and whether the software product has passed the tests.

Chapter 6

Conclusion and Future Scope

6.1 Conclusion

I had the conclusion that I have learned many things during the internship including ReactJs, Django Rest Framework, etc, and implemented them right away on the website that I have been working on.

6.2 Future Scope

The scope of the project is vast. We can build an android app, so the user can easily access the website by phone through the app. We can make some improvements to the website so the user can easily use it and increase the latency. We can add some more features based on the requirements needed in the future.

Appendices:

FPR Report for February Month(7th Jan – 15th Feb)

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Department of CSE

FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY MENTOR

Name of student	Ayush Rathore		Department	CSE	
Industry/Organization	WANSA		Date/Duration	17th Feb, 2022	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality/Timely completion of assigned work			✓		
Learning capacity/Knowledge up gradation					✓
Performance/Quality of work				✓	
Behavior/Discipline/Team work				✓	
Sincerity/Hard work				✓	
Comment on nature of work done/Area/Topic	Ayush has done excellent contribution to the company since he has joined. I am happy to have him on my team.				
OVERALL GRADE (Any one) (POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT)	VERY GOOD				
Name of Industry Mentor	Akshit Dhar				
Signature of Industry Mentor	Akshit Dhar				

Receiving Date	17th Feb, 2022	**Name of Faculty Mentor**	Prof. Jaimala Jha	**Sign**	Jaimala

FPR Report for February Month(15th Feb – 28th Feb)

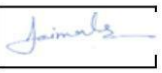
MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Department of CSE

FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY MENTOR

Name of student	Ayush Rathore		Department	CSE	
Industry/Organization	WANSA		Date/Duration	3rd Mar 2022	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality/Timely completion of assigned work				✓	
Learning capacity/Knowledge up gradation					✓
Performance/Quality of work				✓	
Behavior/Discipline/Team work					✓
Sincerity/Hard work				✓	
Comment on nature of work done/Area/Topic	Ayush has done excellent contribution to the company since he has joined. I am happy to have him on my team.				
OVERALL GRADE (Any one) (POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT)	VERY GOOD				
Name of Industry Mentor	Akshit Dhar				
Signature of Industry Mentor	Akshit Dhar				

Receiving Date	3rd Mar, 2022	**Name of Faculty Mentor**	Prof Jaimala Jha	**Sign**	

FPR Report for March Month(1st Mar – 15th Mar)

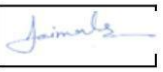
MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Department of CSE

FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY MENTOR

Name of student	Ayush Rathore		Department	CSE	
Industry/Organization	WANSA		Date/Duration	18th Mar 2022	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality/Timely completion of assigned work				✓	
Learning capacity/Knowledge up gradation					✓
Performance/Quality of work				✓	
Behavior/Discipline/Team work					✓
Sincerity/Hard work			✓		
Comment on nature of work done/Area/Topic	Ayush has done excellent contribution to the company since he has joined. I am happy to have him on my team.				
OVERALL GRADE (Any one) (POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT)	VERY GOOD				
Name of Industry Mentor	Akshit Dhar				
Signature of Industry Mentor	Akshit Dhar				

Receiving Date	18th Mar 2022	**Name of Faculty Mentor**	Prof. Jaimala Jha	**Sign**	

FPR Report for March Month(16th Mar – 31st Mar)

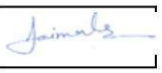
MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Department of CSE

FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY MENTOR

Name of student	Ayush Rathore		Department	CSE	
Industry/Organization	WANSA		Date/Duration	1st April 2022	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality/Timely completion of assigned work				✓	
Learning capacity/Knowledge up gradation					✓
Performance/Quality of work					✓
Behavior/Discipline/Team work					✓
Sincerity/Hard work				✓	
Comment on nature of work done/Area/Topic	Ayush has done excellent contribution to the company since he has joined. He is a valuable asset to Wansa.				
OVERALL GRADE (Any one) (POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT)	EXCELLENT				
Name of Industry Mentor	Akshit Dhar				
Signature of Industry Mentor	Akshit Dhar				

Receiving Date	1st April 2022	**Name of Faculty Mentor**	Prof. Jaimala Jha	**Sign**	

FPR Report for April Month(1st April – 15th April)

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Department of CSE

FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY MENTOR

Name of student	Ayush Rathore		Department	CSE	
Industry/Organization	WANSA		Date/Duration	15th April 2022	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality/Timely completion of assigned work				✓	
Learning capacity/Knowledge up gradation					✓
Performance/Quality of work				✓	
Behavior/Discipline/Team work					✓
Sincerity/Hard work				✓	
Comment on nature of work done/Area/Topic	Ayush has done excellent contribution to the company since he has joined. He is a valuable asset to Wansa.				
OVERALL GRADE (Any one) (POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT)	EXCELLENT				
Name of Industry Mentor	Akshit Dhar				
Signature of Industry Mentor	Akshit Dhar				

Receiving Date	15th April 2022	**Name of Faculty Mentor**	Prof. Jaimala Jha	**Sign**	

FPR Report for April Month(15th Apr – 30th Apr)

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Department of CSE

FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY MENTOR

Name of student	Ayush Rathore		Department	CSE	
Industry/Organization	WANSA		Date/Duration	1st May 2022	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality/Timely completion of assigned work				✓	
Learning capacity/Knowledge up gradation					✓
Performance/Quality of work				✓	
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Name of Industry Mentor	Akshit Dhar				
Signature of Industry Mentor	Akshit Dhar				

Receiving Date	1st May 2022	**Name of Faculty Mentor**	Prof. Jaimala Jha	**Sign**