

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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



Final Year Internship Report

Backend Developer at Praedico Global

Submitted By:

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MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE

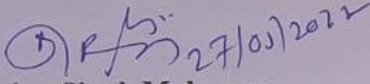
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MAY-JUNE 2022

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CERTIFICATE

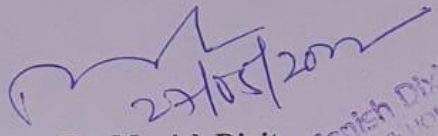
This is certified that **Janvi Patsaria** 0901CS181045 has submitted the Internship report titled **Backend Developer** under the mentorship of **Dr. Rajni Ranjan Singh Makwana** in partial fulfilment of the requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering from Madhav Institute of Technology and Science, Gwalior.


Dr. Rajni Ranjan Singh Makwana

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Date: 15th -May - 2022

CERTIFICATE OF INTERNSHIP

This certificate is awarded to

Ms. Janvi Patsaria

In appreciation for your accomplishments in the company as an intern
(Position titled - "*Hardcore Developer*") at **Praedico Global Research Pvt.
Ltd.**, from **January 10th, 2022 to May 10th, 2022.**

We take this opportunity to wish you a long, happy and successful career.

(Worlds Finest Robotic Stock Researchers)

Authorized Signatory

Praedico Global Research Pvt. Ltd.

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DECLARATION

I hereby declare that the work being presented in this report, for the partial fulfilment of requirement for the award of the degree of **Bachelor of Technology in Computer Science** and Engineering at **Madhav Institute of Technology & Science**, Gwalior is an authenticated and original record of my work under the mentorship of **Dr. Rajni Ranjan Singh Makwana**, Computer Science Department

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



Janvi Patsaria

0901CS181045

4th Year,

Computer Science and
Engineering

ACKNOWLEDGEMENT

The full semester project 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 project 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 Dean Academics, **Dr. Manjaree Pandit** for this.

I would sincerely like to thank my department, **Department of Computer Science and Engineering**, for allowing me to explore this project. I humbly thank **Dr. Manish Dixit**, Professor and Head, 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 **Dr. Rajni Ranjan Makwana**, compute science, for his continued support and guidance throughout the project. I am also very thankful to the faculty and staff of the department.

Janvi Patsaria

0901CS181045

4th Year

Computer Science
and Engineering

ABSTRACT

The internship at Praedico global research as the full stack developer under the Python stream helped in learning new concepts and skills. The software engineering skills both in frontend (HTML,CSS,JAVASCRIPT) and backend (python and Django) provided with an opportunity to learn its advance implementation. The project that deals with employee-office web application provides customizable unique feature which makes it different from other projects provided by different companies in the market.

The final implementation of the project will prove helpful to effectively manage employee data and seamless workflow will make it easier for the employee to add, update and delete data.

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Chapter 1

INTRODUCTION

1.1 About the company

The Organisation:

Praedico global research:

A finance neural network company in the field of stock market. It uses specially designed neural networks to accurately predict performances of stock markets around the world. They are a modern generation Fintech company which believes in discovering new research products in the field of finance with the effective use of the Artificial Intelligence. It provides free world class research to people across India with highest accuracy. The products boast of an accurate prediction of Indian Stock Market and financial products with an accuracy of more than 80%. Average Indian investors spend an average of 40k-50k in form of advisory & research fees which Praedico will be bringing down to Nil in coming years.

Vision :

To be the bellwethers in eradicating financial discrepancy around the world by providing financial access to people who don't have money to access costly financial products.

Mission:

To be the leader in financial products development world over. Products so developed should have highest performance and lowest fees in comparison to other financial products in the market.

1.2 Roles and responsibility

I joined Praedico global research on 10 January 2022 as the full stack developer and was assigned Python stream. During my journey at Paredico I learnt many technologies. I was assigned PVO (Praedico Virtual office project). I worked under the mentorship of Mr. Priyank Gupta who constantly guided me throughout my internship.

During the first month I was acquainted with the working of the company, the technologies that were required to be learned. I got to experience the working environment of the company. I was assigned the project on 2 February 2022. All the requirements, features of the project were explained. Along with it we have to attend Knowledge transfer (KT) for the project every week and give updates about the progress of the project to our organization mentor.

1.3 Technology learnt:

Backend: Python with Django

Frontend: HTML, CSS, JS

Database: Mysql

Chapter 2
LITERATURE REVIEW

2.1 Project :

I was assigned PVO (Praedico Virtual office) project, an office management project which extensively stores employees data, assigns task, rewards bonus when tasks are completed. This project is built to be used by praedico employees to make their work easier, to track their process and can assessed from anywhere. Office management services are provided by various companies like zoho,Trello,skedulo,etc.

ZOHO:

Github is a web-based platform used for version control. Git simplifies the process of working with other people and makes it easy to collaborate on projects. Team members can work on files and easily merge their changes in with the master branch of the project.

ZOHO employee management app provides:

- Instant updates
- Employee space
- Access anytime
- Better management by managers

Trello:

- Get more work done with Trello's customizable-yet-simple boards, lists, and cards.
- Easy, Drag-and-Drop Editing.
- Easy Organization with Labeling, Tags, and Comments.
- Easy Upload (Local Devices, Dropbox, Google Drive, and Box).

VISITAS:

- Create digital business cards.
- Share business cards with your contacts.
- Add people into your address book.
- Modify the address book anytime.

But the PVO project is different from other office management projects with below features:

- Assigns task to employees with constant reminders.
- Dashboard that track the progress of employees and list of task.
- Inbuilt meeting feature
- Employee can easily upload, update and delete.
- Task-list management.

This web application will help the organization with the management of the information of the employees. The system will centralize the management system and will provide different options through access to data will become accessible. The system will be based on the internet so that any user can use it from any place with ease. The Employee Management System software will make a report of each employee of the organization at the end of the month so that the organization will have information about the work of each employee. This Employee Management System will not only reduce the time but as well it will make the system efficient.

Technology learnt and implemented:

SONARQUBE:

Sonar is an **open-source software quality platform**. SonarQube saves the calculated measures in a database and showcases them in a rich web-based dashboard.

CKEDITOR:

CKEditor is a package to provide functionality and design base editors to use a **content design** or many more. the default establishment of CKEditor incorporates a choice of modules. the extra modules and accordingly, carry new helpful highlights to your clients. CKEditor is a toolbar visible when the user page load.

GITHUB:

Github is a web-based platform used for version control. Git simplifies the process of working with other people and makes it easy to collaborate on projects. Team members can work on files and easily merge their changes in with the master branch of the project.

HTML:

Hypertext markup language

- HTML describes the structure of a Web page
- HTML consists of a series of elements
- HTML elements tell the browser how to display the content
- HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.

CSS:

CSS is used to control the style of a web document in a simple and easy way. **CSS** is the acronym for "**Cascading Style Sheet**". **CSS saves time** - we can write CSS once and then reuse same sheet in multiple HTML pages. We can define a style for each HTML element and apply it to as many Web pages as you want.

JAVASCRIPT:

JavaScript is a lightweight, interpreted programming language. It is designed for creating network-centric applications. JavaScript is very easy to implement because it is integrated with HTML. It is open and cross-platform.

- **Client side validation**
- **Manipulating HTML Pages**

AJAX:

AJAX = **A**synchronous **J**avaScript **A**nd **X**ML.

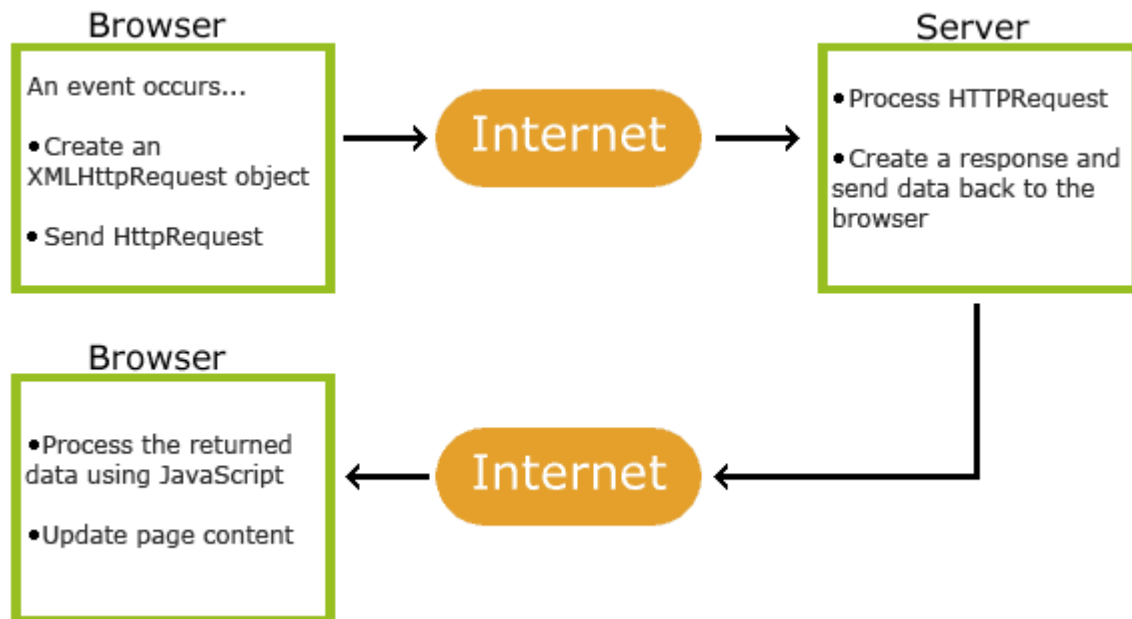


Figure:1 Ajax

PYTHON:

Python is a high-level, general-purpose and a very popular programming language. Python programming language (latest Python 3) is being used in web development, Machine Learning applications, along with all cutting edge technology in Software Industry.

DJANGO:

Django is a web application framework written in Python programming language. It is based on MVT (Model View Template) design pattern. This framework uses a famous tag line: **The web framework for perfectionists with deadlines.**

MYSQL:

- MySQL is a widely used relational database management system (RDBMS).
- MySQL is free and open-source.
- MySQL is ideal for both small and large applications.

Chapter 3

PRELIMINARY DESIGN

3.1 Project overview:

Virtual Office

About the project:

Virtual office project delves deeper with the extra mile of effort took to make the application efficient and user friendly. Below is the detailed description of all the modules of the project. The project was basically divided in two parts. First part deals with the features and usage of employee management and the second part is a learning space like an e-learning portal where one can post courses and employees can enroll in the courses to hone their skills. The database management application used is Mysql that stores data. It extensively uses javascript library Ajax to make the page loading, reloading, updation, submission of forms easier and faster thus making it more efficient.

Modules:

Login:

The user will get access to the system only after they will enter the password and ID provided by the admin. It consists of three different views admin, employee and team head view each has a different level of authorization and controls.

Dashboard:

It is the main page of the web application that keeps track of all the activities. It is made of different modals of the various modules that categorizes data accordingly and displays result. It displays modals like

Stipend, earnings, daily task, team revenue, profile-update profile, pending task etc.

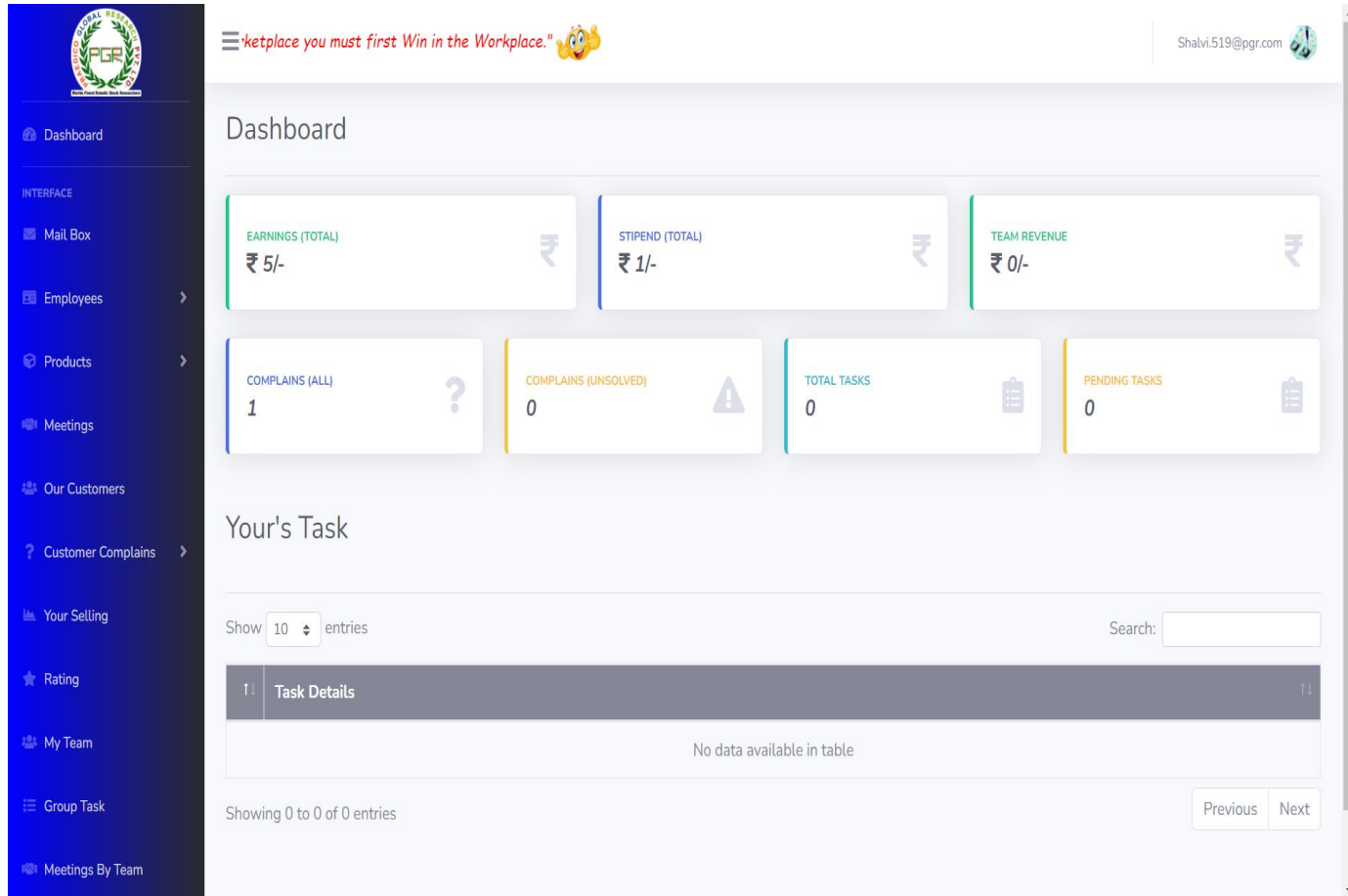


Figure 2: Dashboard

Employee:

- Adding employees and assigning them views on the basis of different level of authorization.

Add New Employee

First Name

First Name

Last Name

Last Name

Email ID

Email ID

Contact Number

Contact Number

Aadhaar Number

Aadhar Number

Address

Address

Pincode

Pincode

City

Select City

▼

Institute

Select Institute

Description

Description

Employee Type

Job Role







Figure 3: Employee form

- If the employee id is the team head it can add new employee view details within its team.

Team Members

Show entries

Search:

Employee Details				
 Janvi.560@pgr.com Janvi Patsaria Update Details	Joining Date 29-Jan-2022 QY 2M 25D	Total Revenue ₹ 0/- Meetings - 0	Task 	Work Report 
 Manav.926@pgr.com Manav Arora Update Details	Joining Date 02-Feb-2022 QY 2M 21D	Total Revenue ₹ 0/- Meetings - 0	Task 	Work Report 

Showing 1 to 2 of 2 entries

[Previous](#) [1](#) [Next](#)

Figure 4: Employee details

- Creating sessions for employees.

Complaint:

- Page to register new complains by customers that are entered into the system by the employee.

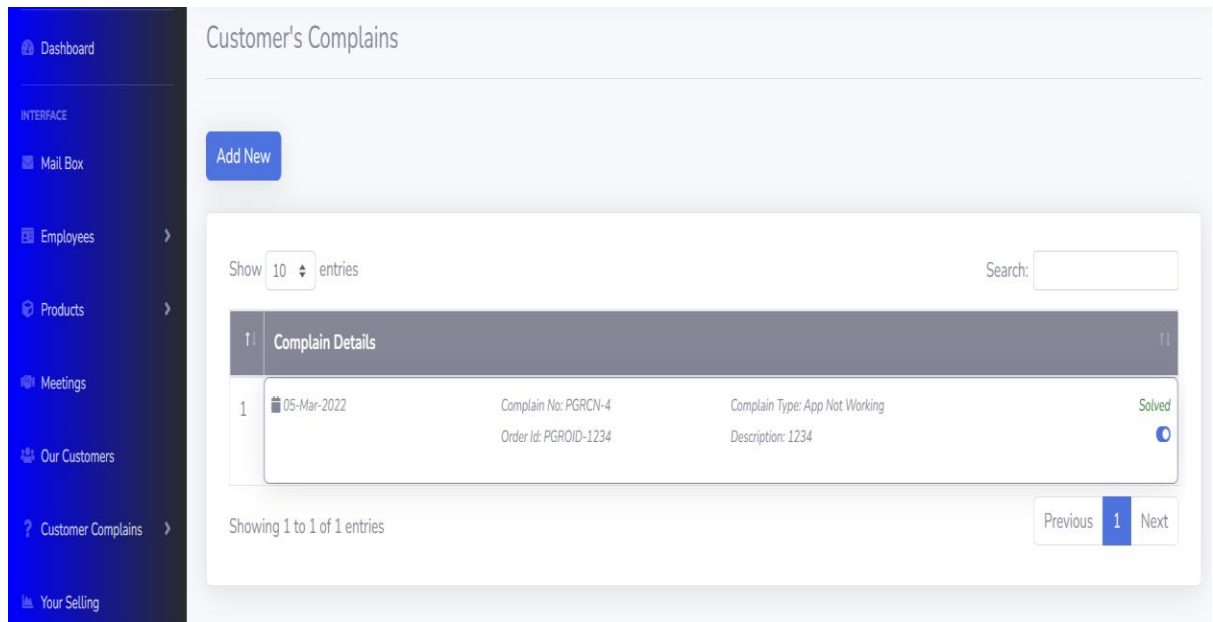


Figure 5: Customer complaints

E-Learning:

- A learning space where a user can enroll in courses and learn the custom-made courses by the company. The wysiwyg editor i.e, Ckeditor is used which is a highly customizable editor to make new pages in Django. It basically has two kinds of views i.e, author and users.
- Author or the admin view can edit pages, enroll new students.
- Users or the student view can view various courses and enroll and access them.
- Student view can access quizzes and submit assignments.

The various modules of the e-learning are as follows:

Page module:

The user can add new pages that is new chapter of the courses that can be easily accessed by the employee.

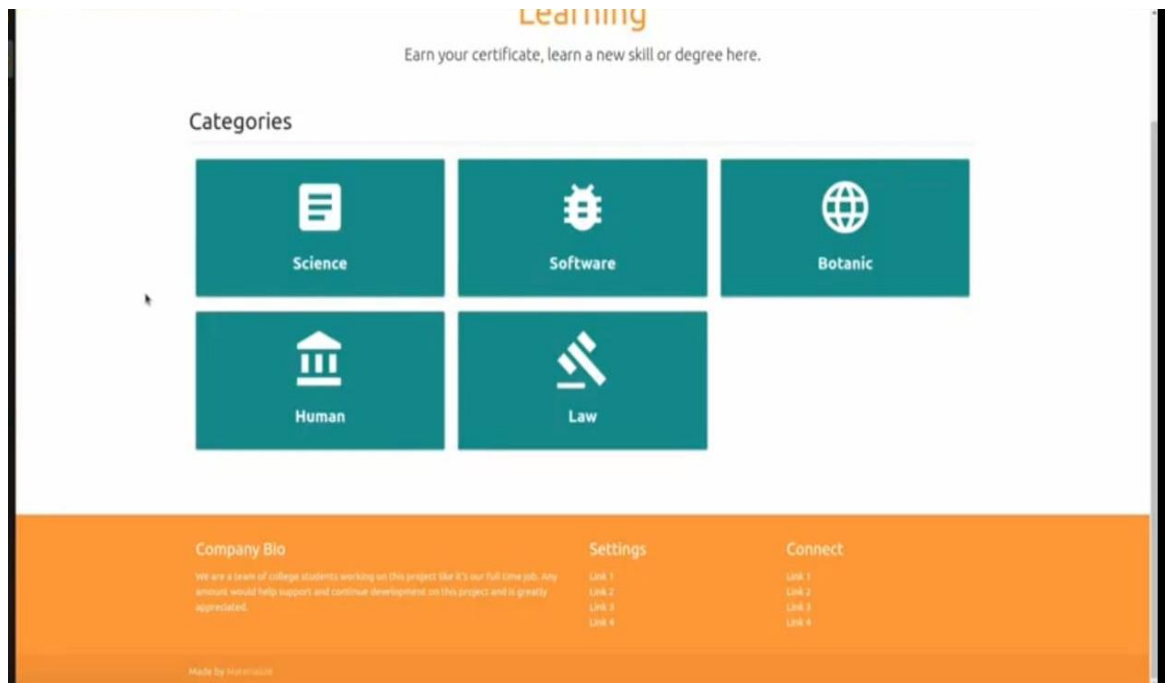


Figure 6: Category module

Assignment module:

Creating new assignments with deadline and a auto update button when the employee submits assignments.

Quiz module:

Creating new quiz with multiple correct answers and a timer with fixed number of attempts. After the completion of assignment employee can view their scores.

Machine learning

Classroom

- Home
- Module
- Submissions
- Questions

Modules

Chapter1

+ ADD NEW PAGE

+

+ ADD NEW ASSIGNMENT

Intoduction

Completed: 0

Figure 7: Classroom module

Technologies learned :

HTML,CSS,JAVASCRIPT,AJAX

Template inheritance

Python in django

Chapter 4
FINAL ANALYSIS AND DESIGN

4.1 Result and conclusion:

During the course of my internship, I gained extensive knowledge about web development how it is applied in real world projects. The assigned virtual office project helped in the holistic development of my frontend and backend skills. I learnt how work is carried out in corporate world.

Virtual office project is an efficient project that will be used by the praedico employees making it easier to manage their task and the admin to manage employees.

It gives special features to admin that helps in efficient management of employee database.

It is a one stop solution to all the problems that are currently faced by the employees.

The customizable features provided makes it a unique web application in the market where there are dime a dozen of office management services provided by different companies.

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