A red text on a white background

Description automatically generated

|  |  |
| --- | --- |
| Project Title | TaxMaster: A Web-based Portal for Tax Calculation |
| Project Estimated Start Date | 26.09.2024 |
| Project Estimated End Date | 17.10.2024 |
| Candidate Name | Sanchari Ray |
| Mentor Name | Samarth Shrivastava |

**GEBS GET Training Project Document**

Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| Doc Version | Submitted Date | Reviewed By and Date | Comment/Remarks |
|  |  |  |  |

Reviewer(s)

|  |  |
| --- | --- |
| Name | Title |
|  |  |

Approver(s)

|  |  |
| --- | --- |
| Name | Title |
|  |  |

Document Reference(s)

|  |
| --- |
| Releated Documents : |
| * <https://economictimes.indiatimes.com/wealth/income-tax-slabs?from=mdr> * <https://www.incometax.gov.in/iec/foportal/help/individual/return-applicable-1> * <https://www.bajajfinserv.in/investments/income-tax-slabs#:~:text=Income%20Tax%20Slabs%20for%20FY%202024%2D25%20>   (AY%202025%2D,15%2C00%2C001%20%2D%2030%25.   * <https://docs.djangoproject.com/en/5.1/> * <https://htmlcolorcodes.com/> * <https://en.wikipedia.org/wiki/Income_tax_in_India> * [e-Filing Home Page, Income Tax Department, Government of India](https://eportal.incometax.gov.in/iec/foservices/#/TaxCalc/calculator) |

1.Introduction

1.1 Scope

* **Project Name:**  TaxMaster: A Web-based Portal for Tax Calculation
* **Objective:** The objective of TaxMaster is to create an user-friendly platform where individuals can securely upload their financial details. Utilizing predefined tax rules and regulations, the system will automatically calculate taxes and provide personalized suggestions to optimize tax returns. This platform aims to simplify the tax planning process, enhance user experience, and maximize tax savings by offering accurate, reliable, and compliant tax optimization strategies. The portal also ensures data security, user privacy, and continuous updates to reflect the latest tax laws, making tax management efficient and accurate.
* **Goal:** The goal of TaxMaster is increase user enhancement which will reduce the complexity of tax calculations to any users. It will help maximum to maximum users to maximize their tax savings through optimized suggestions and the platform will have the ability to give security to the users uploading their confidential data.

1.2 Technology Stack

**Software Requirements:**

* *VSCODE(Visual Studio Code)*  for performing the Frontend and Backend functionalities.
* Install and Setup *SQL Server Management Studio (SSMS)* or any other server which supports MS SQL.

**Technology Used:**

* Programming Lnaguage : **Python**
* Technology for Frontend : **Django Template(HTML,CSS)**
* Technology for Backend : **Django**
* Database **: Microsoft SQL Server**

**Prerequisites to be installed:**

* Python Installation of version 3.9 or later from Python Official Website
* Installation of Django: *‘pip install Django’*
* Installation of Django API: *‘pip install djangorestframework’*

1.3 Glossary or Terminology

* **Old Tax Regime :** The tax regime that allows to claim deductions like HRA,LTA,Section 80c etc.
* **New Tax Regime :** The tax regime with lower tax rates but without deductions.
* **Annual Income :** The total income earned by the individual in a financial year before any deductions.
* **Taxable income :** Income on which tax is computed after deductions.
* **Tax Rates :** Percentage of tax applicable on income based on slabs.
* **Standard Deduction :** A flat deduction available to all salarised taxpayers.
* **Section 80C Deduction :** Deduction including investments in PPF, NSC, EPF etc.
* **Section 80D Deduction :** Deductions related to medical insurance premiums.
* **Surcharge Rates :** Additional tax on individuals with income exceeding specific thresholds.
* **Cess Rate :** An additional tax calculated as 4% of the total tax liability.
* **Tax Advisor :** An financial expert who helps individuals to plan and optimize their tax situation.
* **JWT(Json Web Tokens) :** JWT is used for transmitting secure, verifiable information between two parties in web applications.
* **Income Tax Rebate :** In india income tax rebates play a crucial role in providing substantial relief to tax payers particularly those belonging in the middle income segment, which reduces their total tax laibility.

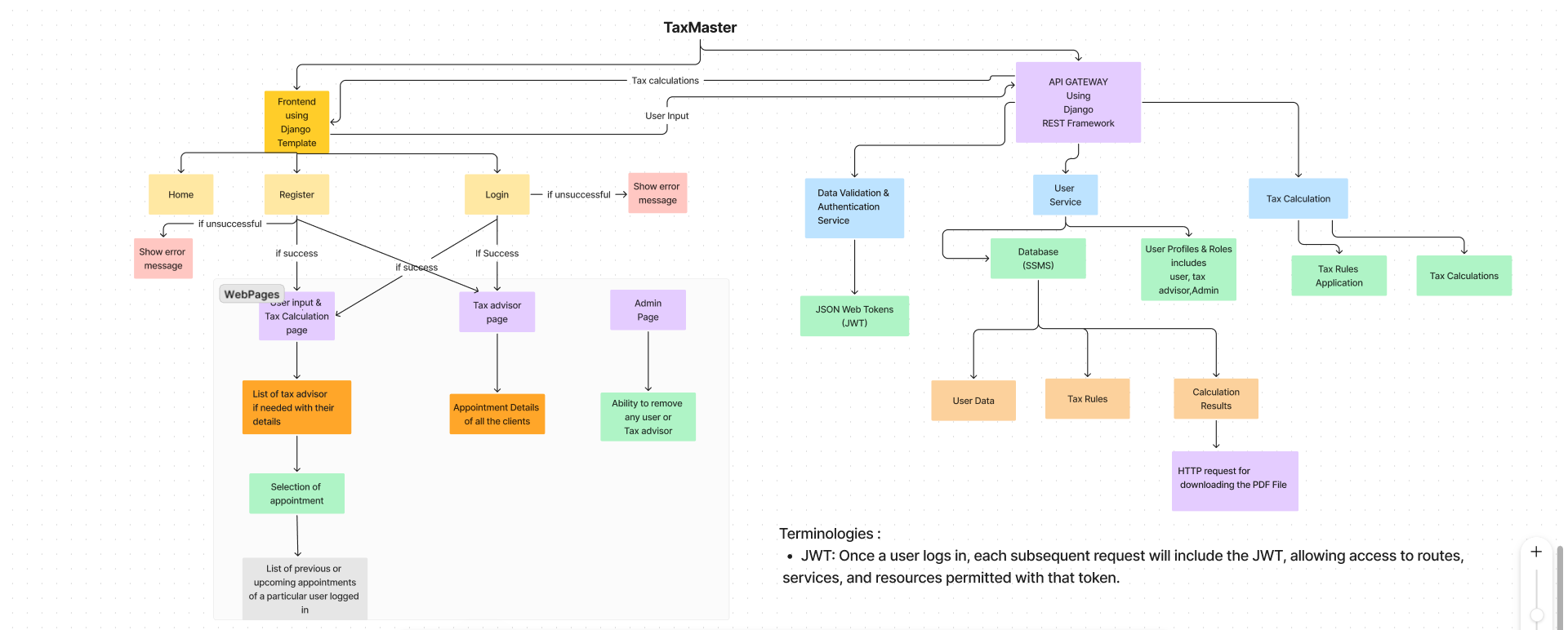
1.4 High Level Design

**Detailed Design of UserWebPage:**

**A diagram of a company

Description automatically generated with medium confidence**

**High Level Design:**

****

[*The link for figma*](https://www.figma.com/board/DjV4dPlbyqHElUMZG0y5wA/Tax-Calculation-Web-Design?node-id=40-1427&t=QRLACmeM8D050WjK-1)*:* [*https://www.figma.com/board/DjV4dPlbyqHElUMZG0y5wA/Tax-Calculation-Web-Design?node-id=40-1427&t=QRLACmeM8D050WjK-1*](https://www.figma.com/board/DjV4dPlbyqHElUMZG0y5wA/Tax-Calculation-Web-Design?node-id=40-1427&t=QRLACmeM8D050WjK-1)

1.5 Programming Standards

1. **Separation of Concerns(SOC):**
   1. *HTML ,CSS Separation in Frontend:*

Used HTML,CSS code separately for code cleanliness.

*1.2 Views and Forms Separation in Backend:*

Business logic such as authentication, OTP handling etc. is separated into dedicated views and the error rules and messages are defined inside their respective forms.

1. **Django Best Practices:**

*2.1 Usage of Class-Based Views and Function-Based Views:*

Used Class-based views like **‘CustomLoginView’** is made which uses a class-based view structure which helps to keep the login logic organized. Simpler tasks such as checking the OTP or processing the login form are handled by function-based views.

A screen shot of a computer program

Description automatically generated

**Code Snippet For Class-Based Views and Function-Based Views**

*2.2 Django Decorators:*

Decorators like **‘@login\_required’** and **‘@user\_passes\_test’** are used to manage access control, ensuring that specific views are only accessible to logged-in users.

This is imported from Django built in functions django.contrib.auth.decorators called

login\_required.

A screen shot of a computer program

Description automatically generated

**Code Snippet For Django Decorators Like ‘@login\_required’**

1. **Validation Logic:**

*3.1* Custom validation methods (e.g., **clean\_time** and **clean\_requested\_date**) are used to enforce business rules (e.g., ensuring selected times are within the specified slot range and that the requested date is not in the past).

*3.2* The code raises **forms.ValidationError** when validation fails, providing feedback to users, and helps the users to rectify the error.

*3.3* Usage of Try and Except block:

Implemented to handle exceptions-errors that occur during the exception of code. These will help to catch the errors and handle them gracefully.

A screen shot of a computer code

Description automatically generated

**Code Snippet for Try and Except Block**

1. Breaking the project into small modules for code cleanliness.

A screenshot of a computer

Description automatically generated

**Code Modularity**

1. **Other Standards:**

4.1 Maintained a Github Repository where a main branch is created and regularly merge the branches (like working branches) into the main branch only after ensuring that the code is error-free.

4.2 Maintained logs as well where all the error logs as well as success logs with timestamps are visible.

1.6 Components

In my project, I am maintaining mainly 5 components which are:

* **accounts** : In this component, I have maintained the functionalities like Registration, Login, OTP Validations , login for forget password and setting up a new password.
* **advisor**: In advisor component, all the functionalities related to tax-advisor is maintained like, maintaining the list of available tax-advisors, maintaining the tax-advisor profile and all the requests been sent to a tax-advisor for an appointment are maintained.
* **appointment:** Herethe logic behind the appointment related functionalities are coded where requesting an appointment, managing an appointment (accepting or declining), sending the appointment requests to the respective tax-advisor is being maintained.
* **base:** The landing page, the dashboard for user regarding their appointment and the user’s details are maintained in the base component**.**
* **calculator:** The main component of the project is the calculator where all the logic related to tax calculations, printing a pdf , showing the tax-advisor list to an user, the tax slabs are mentioned in this component.

1.7 Pre-requisite

* Taxation Rules and Policies of Indian Government.
* Aware of the salary structure which includes basic pay, allowances, bonuses, deductions etc.
* Aware of the tax slab rates for the respective Financial Year.
* Must have the knowledge about standard deductions, rebates and cess of respective tax regimes.
* Understanding of Django’s project structure, views, models and templates.
* Knowledge on Python as Django is built in it.
* Basic frontend knowledge for user interfaces like HTML, CSS and JS.
* Basic understanding of database designs, SQL queries and how to manage salary and tax data in relational database (Microsoft SQL Server).

1.8 User Guide

**1. Getting Started :**

**Registration**

Visit the Registration Page: Access the website and go to the registration page.

Enter Valid E-mail ID: Input your valid E-mail ID to receive an OTP (One-Time Password).

Enter OTP: Check your phone for the OTP, enter it, and proceed to complete the registration.

**Login**

Access Login Page: Go to the login page after accessing to the website.

Enter Registered E-mail ID and OTP: Enter the same E-mail ID and a OTP sent to verify your login.

Successful Login: Once verified, you’ll enter the main dashboard where you can choose your role.

**2. User Role Selection**

After logging in, you’ll be prompted to select one of the two roles:

**User:** Choose this if you want to calculate your taxes and seek assistance from tax advisors.

**Tax Advisor:** Choose this if you are a licensed tax advisor offering services to users.

*Note: The role selection cannot be changed after the initial setup. Choose carefully based on your requirements.*

**3. Features and Functionalities**

**For User Role**

**A. Tax Calculation**

Enter Income Details: Go to the “Calculate Tax” section and enter your annual income details.

Calculate Tax: Click the “Calculate” button to view your tax liabilities.

View Results: The calculated tax will display, showing detailed tax breakdowns along with the deductions.

Suggestion of best tax regime: Tax for both the regimes will be calculated and will be displayed along with the best regime suitable for you.

**B. View Available Tax Advisors**

Browse Advisors: Access the “Available Tax Advisors” section to view a list of available tax advisors.

View Profile: Click on any advisor’s name to view their profile details (years of experience, license number, total clients, etc.).

**C. Requesting a Tax Advisor**

Send Request: If you wish to consult a tax advisor, click “Request Appointment” on the advisor’s profile.

Await Approval: Once requested, the tax advisor can either approve or decline the request. You’ll be notified of the decision via email .

Connect: Once approved, you’ll be able to communicate with the tax advisor as per the website’s options (e.g., online meet or in person).

**For Tax Advisor Role**

**A. Profile Setup**

Enter License Information: Provide your official license number during the role setup.

Add Experience Details: Indicate your years of experience and the number of clients you have served.

Profile Verification: Your profile will be made available to users looking for tax assistance.

**B. Approving/Declining User Requests**

View Requests: Go to the “User Requests” section to see pending consultation requests.

Approve/Decline: Click “Approve” to accept the request or “Decline” to reject it.

Connect with Approved Users: Once you approve a user, they will be able to communicate with you through the platform’s messaging or consultation features.

**C. Tax Calculation**

Tax advisors can also use the tax calculation tool for their clients as well as for himself:

Enter Client Income Details: In the “Calculate Taxes” section, enter the income details provided by the client.

Calculate and Advise: Generate the tax calculation and share advice based on the results.

Help the clients: Help the clients to reduce their and also help them in tax e-filing.

**4. Troubleshooting**

OTP Not Received: Wait a few moments; if still not received, try resending the OTP. Ensure your Email-ID is correct and that you have good network coverage.

Forgot Password: Since login is OTP-based, there's no password recovery needed. Simply re-enter your new password and verify with the OTP.

Access Issues: If you encounter issues accessing specific sections, try refreshing the page or clearing your browser cache.

2.Testing

2.1 Test Scenario(s)