**Doctor Detector**

**One stop destination for all your symptoms**

Problem Statement: A website for disease detection according to the symptoms and recommending the suitable doctor or specialist in the nearby clinics and hospitals.

**Functional Requirements**

* A responsive web application where the user will have to sign in with their google accounts
* They’ll have to attempt a questionnaire on the basis of which the user will put in the symptoms they’re experiencing, according to which the possible medical conditions will be listed down at the end of the questionnaire
* A list of suitable doctors will also be displayed under each medical condition
* Book an appointment through the web-application. The said doctor will get a confirmation mail along with an automatically generated barcode
* When the user is done with the consultation with the doctor, they’ll scan the barcode and do the payment. An invoice will be sent to both to the user, doctor and clinic’s/hospital’s official Mail
* The doctor will provide prescriptions online on the portal itself to keep the track record of prescriptions of the user. They’ll E-Signing it
* Tie-up with online pharmacies
* Additional 10% discount for the users who go to the recommended doctors through the website
* FAQ section to answer all the questions by the support team
* Feedback for all the doctors visited (5 star with comments review system)
* A glossary section which explains medical terms like medical practitioners (Eg: Cardiologist), medical Instruments (Eg; ECG machine), Types of blood tests, Types of basic checkups needed for every age range.

**Technical Functional Requirements**

* Backend Tools: Python (VS Code Editor)
* Front-end: HTML, CSS, Bootstrap 5, Java-script,
* Database: Oracle Workbench (Database Management)
* System Designs: Use-Case Diagrams, Activity Diagrams, Sequence Diagrams, E-R diagram, Database tables
* Web tester: Selenium

**Non-Functional requirements**

* Safety Requirements: The login portal and the questionnaire will be tested for any software malfunctions and other risks
* User Requirements: Valid Login credentials
* Ethical Considerations: The collection and analysis of data of users and doctors will be understood as a moral practice
* Detection and response: The project will detect the queries and will answer the questions accordingly
* Digital Security: Portal will be engineered to monitor online threats and communications will be encrypted
* Availability: The availability of web application will depend on internet connection of the user. For further procedures, they’ll need to have an account
* Reliability: Proper exception handling, maintenance of integrity and consistencies of database will be taken care of
* Portability: Since it will be developed using VSCode Studio, thus the application can run on any system
* Maintainability: The project will be made in a simple and lucid style so that future maintenance of the project is easy

**Time Constraint**

The duration of the project will be 8 months (Working hours: 40hrs/week, Buffer time: 30 days)

21/09/2022 -21/05/2023

**People Resources**

* Project Manager: Isha Tiwari
* Backend Developer: Biswaroop Bhattacharjee, Palak Maheshwari, Isha Tiwari
* Front-end Developer: Isha Tiwari, Biswaroop Bhattacharjee
* Cloud Management: Palak Maheshwari, Siddharth Iyer
* Database Administrator: Hritik Jaipuria, Biswaroop Bhattacharjee
* Testing: Rahul Senthil Kumar
* Business Analyst: Siddharth Iyer, Rahul Senthil Kumar

**Equipments and Materials**

* 6 Laptops – core processor i7 or above, cuda enabled gpus, nvidia graphic cards
* Notepads (10)
* Pens (20)
* Whiteboards (2)
* Whiteboard Markers (4)
* Projector
* Printer

**Facilities**

* Food
* Coffee machine
* Office Space (Cubicles and meeting rooms)

**Cost Constraint**

Budget of the project will be 3 crores

**Agreements and Contracts**

NDA and contracts with clients

**Risks**

* Project Risk

1. Budget - Overbudgeting
2. Schedule – Less working hours
3. Personnel – Any team member leaves/takes casual or sick leaves
4. Resource – Faulty Hardware or facilities
5. Customer Relation -
6. Intangible Products

* Technical Risk

1. Concerned Potential Method
2. Implementation
3. Interfacing
4. Testing
5. Maintenance
6. Technical Uncertainty

* Business Risk

1. Societal Changes
2. Flawed market demand assessments

**Principles of risk management**

Major risk is Ethical Safety where the collection and analysis of data of users, doctors and pharmacies could be at risk of security breach. This will be resolved using OTP validations and automatic barcode generation.

Aadhar Validation from digilocker

OTP Validation: Users will receive otp on entered email-Id. After verification they’ll be registered for signing up. They’ll even receive OTP for appointments made.

Barcode generation: A barcode will be generated automatically after the appointment will be made and will sent to the doctor to facilitate the payment procedure after the consultation.

**SDLC**

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| **Phases** | **Start Date** | **End Date** | **Cumulative Days / Weeks** |
| Planning | 21/09/2022 | 27/09/2022 | 7 /1 |
| Requirement Analysis | 28/09/2022 | 11/10/2022 | 14/2 |
| Design | 12/10/2022 | 23/12/2022 | 73/10.43 |
| Development | 02/01/2023 | 23/04/2023 | 112/16 |
| Integration/Testing | 24/04/2023 | 21/05/2023 | 30/4 |
| Buffer Days | 22/05/2023 | 21/06/2023 | 30/4 |
|  |  |  |  |