**Software Engineering Methodology**

Waterfall approach was first Software Development Lifecycle (SDLC) Model to be used widely in Software Engineering to ensure success of the project(s). In Waterfall approach, the whole process of software development is divided into separate phases. In this Waterfall model, typically, the outcome of one phase acts as the input for the next phase sequentially. This is why I found it most appropriate for my software.

Requirement Gathering and analysis − All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification document.

System Design − the requirement specifications from first phase are studied in this phase and the system design is prepared. This system design helps in specifying hardware and system requirements and helps in defining the overall system architecture.

Implementation − with inputs from the system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality, which is referred to as Unit Testing.

Integration and Testing − All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.

Deployment of system − Once the functional and non-functional testing is done; the product is deployed in the customer environment or released into the market.

Maintenance − There are some issues which come up in the client environment. To fix those issues, patches are released and to enhance the service some better versions are released. Maintenance is done to deliver these changes in the customer environment.

**CONTEXT MODEL OF WATERFALL METHODOLOGY**

Requirement gathering and analysis

System Design

Implementation

Testing

Deployment of System

Maintenance

**Interaction Model**

START

Open Website

Connected to internet?

Select Location

Finish

Get picked, directed or professionals sent to area of occurrence

Client Preference

Confirmation details

More details

Insert patient information

Found?

**Registration Process**

Start

Click on the Signup button

Enter potential client details

Give The Medical History In case Medical Issues Occur Frequently

End

**Structural Models**

**Entity-Attributes Relationship**

Service centre

Preferrable medical centre

Date of birth

CONTACT

SERVICE

Ambulance

Flying doctor

USER

Residential area

Name

**Entity Life History**

CLIENT

High blood pressure

COVID-19

Asthma

Vulnerability

Area of residence

SERVICES

History

Date of birth

**Behavioural Model**

|  |  |
| --- | --- |
| **Essential Services Admin** | **Client Side** |
| Assign physicians or provide navigation and contacts  View new appointments  Encode login requirements  START  END | Display Dashboard  Display ‘’Wrong Input’’  Is Input Correct?  Show Login Form  If Yes  If No  Secure all Information  Update and Save Records  Show nearest service centre from point of operation |