**Project Report**

**CS 157A**

**Project 1: eTRT System**

**Endalkachew Aychiluhim**

**Keonwoong Min**

## Syed Sarwar

**November, 2019**

|  |
| --- |
| Copyright © 2019 |
| Endalkachew Aychiluhim, Keonwoong Min, Syed Sarwar |
| ALL RIGHTS RESERVED |

**ABSTRACT**

**eTRT Java Application**

By Endalkachew Aychiluhim,  Keonwoong Min, Syed Sarwar

 eTRT is a java application that patient data/information storage platform. This application developed by using both mysql and java programming. We mainly use mysql workbench and Mysql server and eclipse to develop this application. Our team designed and built crucial components for this project. We reduced the complexity and number of components in order to scale the project to the size of work to implement in three weeks to be feasible yet substantial for the project to run.

In addition, we implemented eTRT application which provides visual interface to patients and healthcare providers and that, except for some features, introduces several vital features to users such as registration new patients and add new visitor pages.

**Table of Contents**

[**1.**](https://docs.google.com/document/d/1Kc3ETwqM9IIbL66DaQDidXAWs4I8ZrAOqF2JaPbD0yw/edit#heading=h.a68x3vnmu4v5) **Problem Statement     4**

**2**[**. Project Requirements**](https://docs.google.com/document/d/1Kc3ETwqM9IIbL66DaQDidXAWs4I8ZrAOqF2JaPbD0yw/edit#heading=h.5hblvknoatoo) **5**

**3. Architecture Design    5**

**4. Chosen Technology/ Tools Used    6**

**5.Instructions to deploy and System Implementation    7**

**6.Contributions of each team member    10**

## Problem Statement

    The primary goal of this project is to create a platform for eTRT to store patients and visitors information which  helps to register and manage patients information for healthcare companies. Just as any healthcare or hospital patient registration form, this application provides a platform that simply accessed by healthcare providers, nurses, customer services people, actual patients and visitors. With this convenience we will need to utilize different technologies to be able to create this. Therefore another goal is to use a MySQL server and MySQL Workbench to store a reliable and accurate information of patients and visitors. Our application is essential in allowing the patients to be able to easily conduct to register and access their information in the database.

Yet another goal that we have with this project is to create a usable and reliable service that we can call our own. This project will be one of our priorities for CSq157A class and we want to make it the best that we possibly can. Storing and having a usable and reliable data will help to provide accurate and secure data of patients.

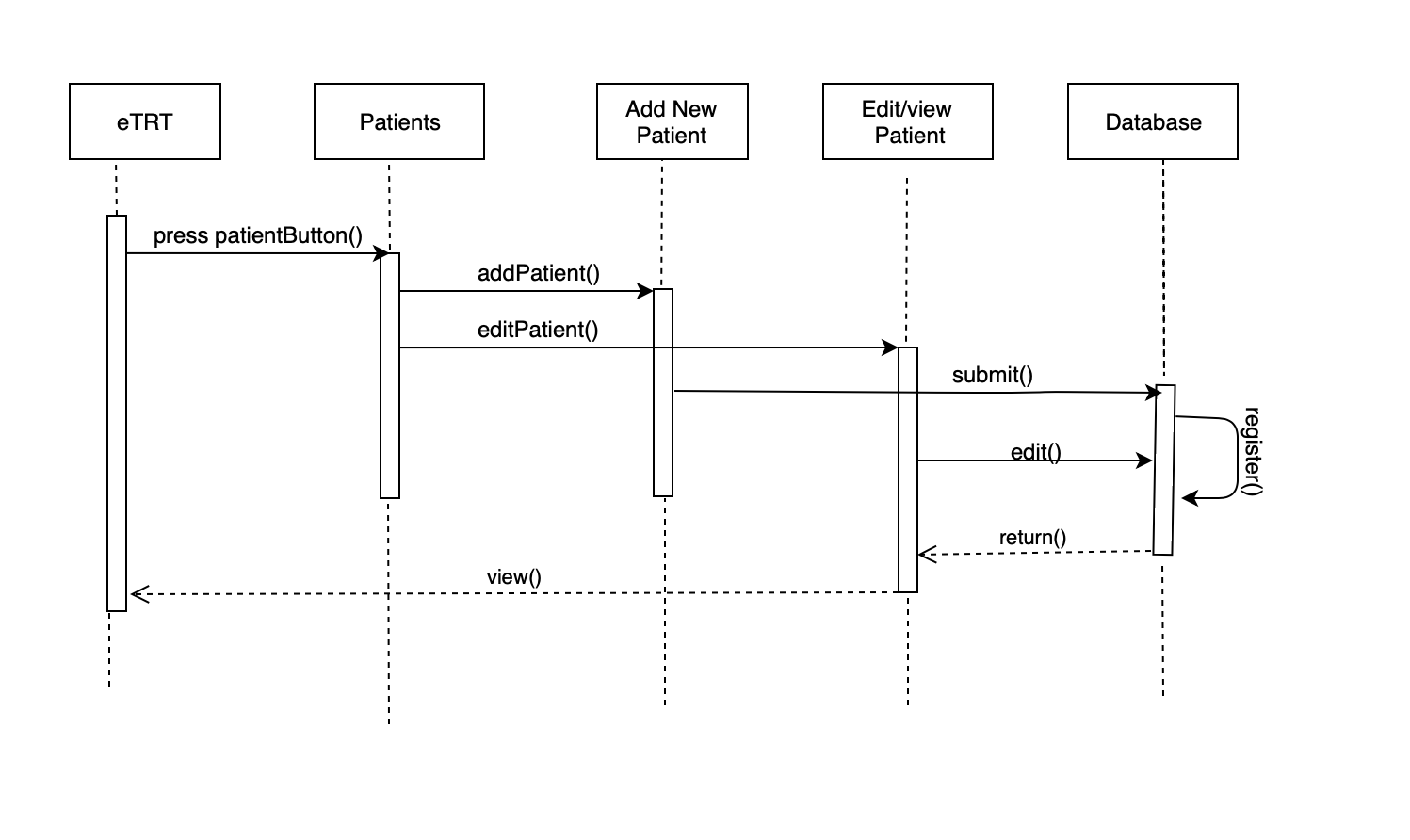
    In order to make our project we will need to learn some new technologies that most of us haven’t been exposed to yet and we will need to stay on top of our plans and the requirements to have it done before the due date. In order to do this we will need to continue to study and practice with MySQL database and server for advance knowledge.

**Project Requirement**

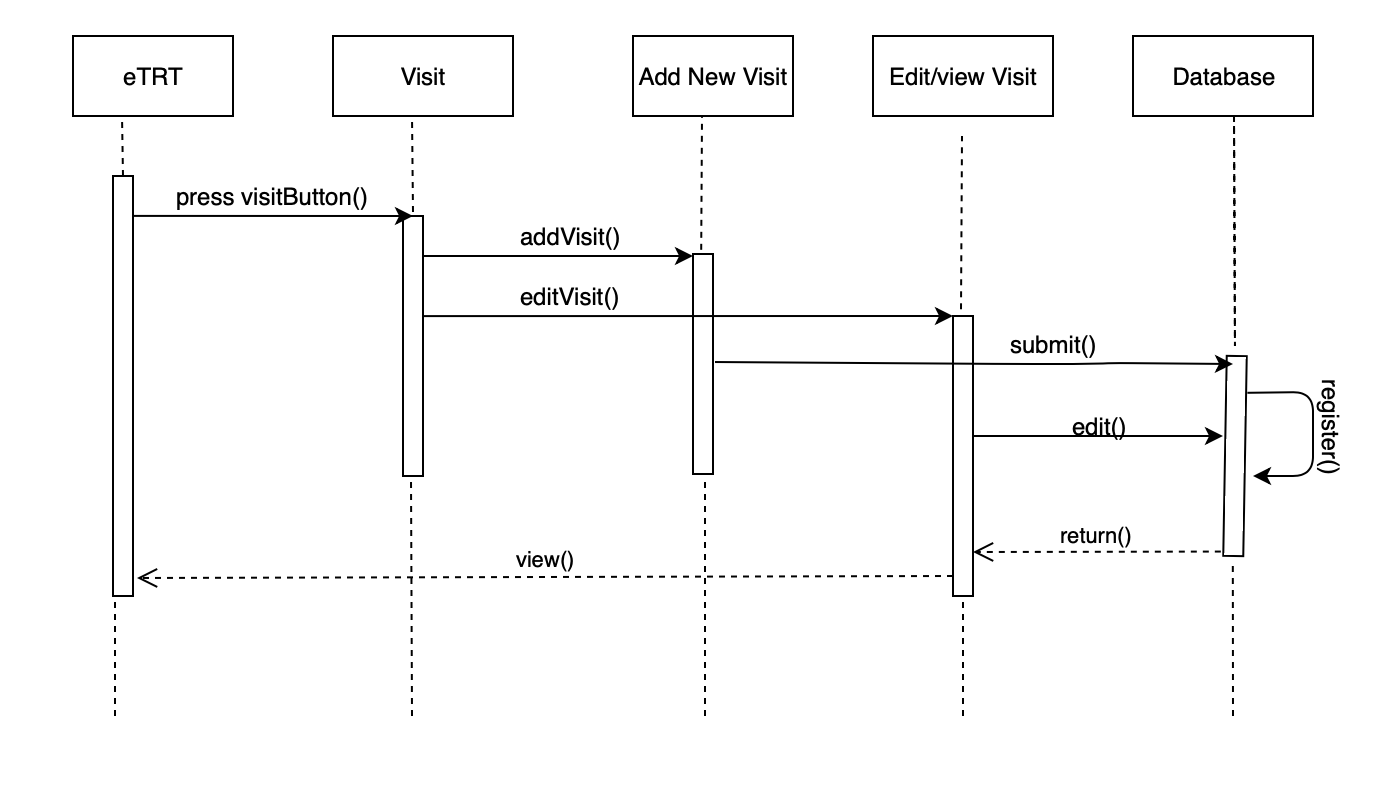
eTRT will follow typical functional and nonfunctional requirements. We will ensure that it encompasses non-functional requirements such as, as an example this project need u[sabilit](https://docs.google.com/document/d/13wV1LdbVDIWxMq_8zAkXYeyGQIsQFCcuxEs-00ySyk0/edit#heading=h.7sfw2yz94ion)y, r[eliability](https://docs.google.com/document/d/13wV1LdbVDIWxMq_8zAkXYeyGQIsQFCcuxEs-00ySyk0/edit#heading=h.muaxyk4qch97), p[erformance](https://docs.google.com/document/d/13wV1LdbVDIWxMq_8zAkXYeyGQIsQFCcuxEs-00ySyk0/edit#heading=h.74y5mr1qsxgm), [supportability](https://docs.google.com/document/d/13wV1LdbVDIWxMq_8zAkXYeyGQIsQFCcuxEs-00ySyk0/edit#heading=h.xqokjk6ps3im) [implementation](https://docs.google.com/document/d/13wV1LdbVDIWxMq_8zAkXYeyGQIsQFCcuxEs-00ySyk0/edit#heading=h.py5z0phyp51u), [interface](https://docs.google.com/document/d/13wV1LdbVDIWxMq_8zAkXYeyGQIsQFCcuxEs-00ySyk0/edit#heading=h.7cc13f1opy60), and [operation](https://docs.google.com/document/d/13wV1LdbVDIWxMq_8zAkXYeyGQIsQFCcuxEs-00ySyk0/edit#heading=h.vjrhnmmm7elt)(access). In general,  these non-functional requirements explain the overall functionality of the system. The functional requirements include the actual interface display that users can access to use the eTRT application.

**Architecture Design**

* **Sequence diagram for patient**

****

* **Sequence diagram for Visit**

****

**Chosen Technology/ Tools Used**

    When creating any piece of software one of the most important decisions to make are which tools we will use for the project. Some tools are very powerful and dramatically reduce the amount of time needed to work on certain things and, just like in any other field, choosing the right tools for the job is very important. We needed to gauge the different tools we would use beforehand and it was something that we would continuously change as the project progressed. The following tools are the main ones that we used, although it is not an exhaustive list as many smaller tools were used but it would be unreasonable to list every single one on here.

* Eclipse
  + We decided to use Eclipse for the front-end work as it would make our work a lot easier as it has many libraries that we coding. Not only does it make things easier, it also supports the amount of depth that we want to have in our project. It also supports a language that all three of us know in Java. This is where the majority of our work was completed and tested.
* Github
  + Version control and management is a very important tool in the programming field. Github provides that version control for our group as we can all work on different things and still maintain our code within a manageable state. It provides ease of use in sharing and updating our project throughout its lifecycle. It also connects easily with all of the other tools that we are using, especially eclipse.
* MySQL Server and Workbench
  + Our data needs to be stored somewhere, and like before, we narrowed it down to two choices, hosting and maintaining our own servers or using a system that was already established. We chose to use MySQL server and MySQL Workbench for its ease of use and system that easily integrates with our project on eclipse.

**Instructions to deploy and System Implementation**

As described above, the frontend and ui is running by eclipse java compiler. Therefore, any user can run and use our application by using eclipse running commands. At the same time,  the program is integrating with MySQL workbench and all data registered in the database.

|  |  |
| --- | --- |
| Test Case |  |
| **Tested By:** | Endalkachew Aychiluhim |
| **Test Type:** | Black Box Testing |
| **Test Case ID:** | blackboxDT1.1 |
| **Date:** | 11/26/2019 |
| **Test Item:** | Add a new patient |
| **Test Suite:** |  |
| **Release and Version #:** | eTRT  v 1.0 |
| **Test Case Description:** | Add new patients to the database |
| **Pre-Conditions:** | User must input name and information |
| **Post-Conditions:** | No post-Condition |
| **Items to be tested:** |  |
| **1** | Input text in the text field |
| **2** | Fill all inputs with correct format |
| **3** | Save |
| **4** | Check the view/edit  patient |

|  |  |
| --- | --- |
| Test Case |  |
| **Tested By:** | Endalkachew Aychiluhim |
| **Test Type:** | Black Box Testing |
| **Test Case ID:** | blackboxDT1.1 |
| **Date:** | 11/26/2019 |
| **Test Item:** | Add a new visit |
| **Test Suite:** |  |
| **Release and Version #:** | eTRT  v 1.0 |
| **Test Case Description:** | Add new visit to the database |
| **Pre-Conditions:** | User must input name and information |
| **Post-Conditions:** | No post-Condition |
| **Items to be tested:** |  |
| **1** | Input text in the text field |
| **2** | Fill all inputs with correct format |
| **3** | Submit |
| **4** | Check the view/edit visit |

**Contributions of each team member**

**Endalkachew Aychiluhim:**

Endalk work on both documentation and actual coding. He did Most of the frontend and final report.

**Keonwoong Min:**

Worked on backend which is database and also fixed bugs on frontEnd and added some features on it.

**Syed Sarwar:**

      Worked on frontend and update some features in the backend.