AAA Automation

Automating grant and revoke application access for different users at

## LabCorp,

## Bengaluru.

Department of Computer Applications Manipal Institute of Technology Manipal University, Manipal

in partial fulfillment of the requirements for the award of degree of

### Master of Computer Applications

submitted by

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January 2023



# Abstract

The project will help the Application Access Analyst (AAA) Team to achieve the end to end automation from getting the required user data from the sponsors to grant or revoke access to the data available in the web applications of Labcorp, fill the user access request forms, and approve the requests by performing quality check by comparing submitted request with the existing data.

# Introduction

LabCorp improves health by helping the sponsors in the drug development process. LabCorp keeps the track of specimen, provide virtual bio repository, informed consent module and assay module. LabCorp deal with huge amount of data of patients, specimen etc. GSS (Global Specimen Solution) is the department inside LabCorp which deals with specimen data and Informed consent data. Labcorp tracks and stores all these data. It’s important to make this data visible only to the required authorities or users. That’s where AAA team comes into picture.

Labcorp has web applications which has information regarding the clinical trials. This data is highly confidential and needs to be secured from unauthorized users. Sponsor sends the data about the users to grant or revoke the access to these applications. They send the data through email or SFTP. AAA Team downloads files from these sources and perform normalization to extract only required information. Once the information is collected it will be filled in the respective request access form. After codifying the data, final quality check will be performed and then the request will be approved. Currently all of these activities are manually performed and it takes a lot of time to process each request.

The objective of the project is to achieve the end to end automation so that the time taken to download and normalize the data can be replaced by creating web forms, so that sponsors can directly fill the required data of the users. Also automating the form filling and request approval. Request access forms are already automated. In the next 2 months, it’s expected to fully automate the entire process.

# Motivation for the proposed work

AAA teams receives on an average 2000 requests every day. The drawback of the current process is that it takes up to 2-4 business days to process a single request. There might be errors while manually handling the data. Because of these reasons overall productivity is reduced.

By automating the entire process, the time taken to process a single request is reduced to minutes. This time reduction has huge impact on the productivity of the business. Also human errors are reduced and user quickly gets access to the applications.

# Objectives

The Objectives of the automation project are:

* To get the user data from sponsors in the form of web forms to grant/revoke/modify access to the data.
* To maintain a database to store user information of all the users.
* To fill the request access forms by entering user data and approve the request by comparing with the existing data.
* To increase productivity by decreasing the time involved in the entire process.
* To minimize the errors which are generating with the manual process.

# Modules

1. Information gathering

* Creating web forms with required fields to get the user data.
* Share these web forms with the sponsors and maintain a database to store the information.
* Check if user is new or existing.
* Set access level type [project, protocol, site].

1. Request approval

* Fill the request access form by evaluating if the user is internal or external [investigator, doctor etc.]
* Approve or reject user access request by comparing with the existing data.

# Technical Details

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| --- | --- | --- |
| **Sl. No** | **Software/Technology** | **Description** |
| 1 | Python | To automate form filling |
| 2 | Selenium |
| 3 | Java 8 | To create web forms |
| 4 | Spring Boot |
| 5 | Tomcat Server v9 |
| 6 | Oracle database | Store all the user information |

# Bibliography

1. Selenium with python web automation tool selenium 4.

<https://www.javatpoint.com/selenium-tutorial>

1. Advanced spring boot for java full stack development with maven project management tool.

<https://www.freecodecamp.org/news/spring-boot-tutorial-build-fast-modern-java-app/>