# DEPARTMENT OF INFORMATION TECHNOLOGU AND COMMUNICATION

## DIPLOMA IN INFORMATION TECHNOLOGY
## (DIGITAL TECHNOLOGY)

## TECHNICAL REPORT
## TRACK SELECTION SYSTEM

**GROUP MEMBERS:**

| | |
|---|---|
| NURMUIZZ BIN HARIDAN | 10DDT20F2070 |
| MUHAMMAD AZIM BIN MOHD ASWAD | 10DDT20F2073 |
| MUHAMMAD AFIQ BIN AZEMAN | 10DDT20F2082 |

**SUPERVISOR:**
ENCIK MUHAMMAD FAREEZ BIN BORHANUDIN

**SESSION: 1 2022/2023**

## DECLARATION

We hereby declare that the technical report entitled "Track Selection System" is based on original work under supervision and guidance of Encik Muhammad Fareez Bin Borhanudin except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other diploma or award at Polytechnic or other institutions.

1. Signature              :

   Name              : NURMUIZZ BIN HARIDAN

   Registration No   : 10DDT20F2070

   Date              : 17/12/2022


2. Signature              :

   Name              : MUHAMMAD AZIM BIN MOHD ASWAD

   Registration No   : 10DDT20F2073

   Date              : 17/12/2022


3. Signature              :

   Name              : MUHAMMAD AFIQ BIN AZEMAN

   Registration No   : 10DDT20F2082

   Date              : 17/12/2022

# APPROVAL FOR SUBMISSION

**Project Title**          : TRACK SELECTION SYSTEM

**Session**          : 1 2022/2023

**Submitted by**          : 1. NURMUIZZ BIN HARIDAN          (10DDT20F2070)

2. MUHAMMAD AZIM BIN MOHD ASWAD (10DDT20F2073)

3. MUHAMMAD AFIQ BIN AZEMAN          (10DDT20F2082)

"This technical report has been read, checked and approved in term of scope and quality for the award of Diploma in Information Technology (Digital Technology)."

**Checked by**

Supervisor's Signature     :

Supervisor's Name          : ENCIK MUHAMMAD FAREEZ BIN BORHANUDIN

Date          : 17/12/2022

# ABSTRACT

The Track Selection System is a project implemented for JTMK (*Jabatan Teknologi Maklumat dan Komunikasi*) in PSP (*Politeknik Seberang Perai*). It provides easy and fast way for student to register and choose their track and make lecturer able to collect student registration data easily. Additionally, replace the use of google form with this new system. This System is developed by using Codeigniter 3 PHP framework as backend and Bootstrap framework as the frontend of the system. Student can choose and register their preferred track by just register to the Track Selection System and log in once they done register. Student can choose their track and apply for change track appeal if they did notget their selected track or unsatisfied with the current track that their in. Once their track result are out, student can just login back to the Track Selection Systemto check the result. This system offers a simple and clear GUI (Graphical User Interface) design for student to easily navigate through.

# TABLE OF CONTENT

# 1.0 PROJECT PLAN

## 1.1 INTRODUCTION

*Politeknik Seberang Perai* (PSP) offers many course and track for their student to choose. Before *Jabatan Teknologi Maklumat dan Komunikasi* (JTMK) student enter semester 3, they need to choose and register a track that offered by PSP. The way of choosing and registering the track for now, is to use Google Form.

What we suggest is a track selection system which will be called iTrek. The system will help JTMK student to choose and register their track easily. Besides, student may register and login to the system and it will save their information for future use which will make student track registration faster. Student may register their track and also make a appeal for changing track in the system as there will be some student who are dissatisfied with their current track or did not get the track that they wanted.

Moreover, the system will store student information and what track they choose which will make the job for the lecturer who is responsible for collecting each student data easier. The lecturer able to check and confirm or reject a student track selection in admin page that our team will create. The lecturer also can check which student that make a appeal to change track and can approve or reject the appeal in the admin page.

Lastly, the purpose of this system is to replace the use of google form with the system created purposely for PSP which will make their job more efficiently and easier.

## 1.2 PROBLEM STATEMENT

There are several obstacles currently faced by JTMK in *Politeknik Seberang Perai* in term of the track selection which led to a significant challenge to achieving efficient and satisfaction of JTMK student.

First and foremost, student of JTMK in PSP who are currently in short semester need to choose a track before continuing to semester 3. The track that JTMK offers are Software and Application Development and Networking System. Student need to use google form in order to register and choose their preferred track. This is where the problem occur which is student need to wait for their lecturer to send the google form before they can register and choose their track. This may led student to miss choosing their preferred track as the track will be filled by other student first.

Secondly, the head lecturer of JTMK need to create the form. He or she need to also collect the data from the goggle form after being filled by the students in order to assign student to their track respectively. The lecturer also need to sent the complete form to the academic supervisor for each class in order to sent the form to each student in each class of JTMK. These are energy and time consuming for the head lecturer as there are many work needed to be done.

Lastly, some student may feel unsatisfied with the track they are in. Therefore, they will ask their academic supervisor to change their track. This process may take long as the lecturer have to check first if there are still some slot left in the other track. The lecture also need to collect the student information as well as their reason to change trackand submit them to the head lecturer of JTMK to make appeal for the student. These maytake some time and will make the student lose interest to study in their current track which is a waste if their appeal is rejected.

## 1.3 OBJECTIVE

The objective of Track Selection System development are:

i.   Develop a system that make selection and registration track for student easier.

ii.  Improve the way of track registration for student in PSP.

iii. Make the work of lecturer to collect data from student easier when they register their track.

## 1.4 SCOPE

This project is being develop purposely to help PSP students and staff members. With this project, they do not need to use Google Form anymore.

### 1.4.1 : USER SCOPE

i.   **Student**

The student can register and log in to the system instantly instead of inserting information in the google form and then choosing a track.

ii.  **Staff**

Consists of *Politeknik Seberang Perai*'s staff who only will monitor the system and received data from student.

**1.4.2 : SYSTEM SCOPE**

The system will use Bootstrap Studio for the interface, Visual Studio Code and Codeigniter 3 MVC for the coding. While for database, XAMPP will be used for connecting to Apache and MySQL and to keep students and staff data. The system consists of several modules such as login module, register module, home page module, result module, track selection module, appeal change track module and admin module. The login module are for the student and staff. Student will login of their account already exist in the system while the staff need to login using their correct username and password. Next, the register module is for student to create account of they are new to the system. The home page module will display selection track and appeal change track. As for the result page module, the page will display the result such as the students' track and appeal status. Next, the track selection is for student to register and choose their track while appeal change track is for student to make a appeal to change track if they wanted to. Lastly, the admin module is for staff to open and close the track selection system, set the date to when the system will open and view the students' data.

**1.5 LITERATURE REVIEW**

This chapter will discuss the comparisons and explain the system that uses similar methods and is related to registration form. The literature review will also improve the performance of the system to reduce the problem that often occurs in some systems such as creating a new form and collecting data.

**1.5.1 GOOGLE FORM**

Google Forms is free online software that allows you to create surveys, quizzes and it is part of Google's web-based apps suite, including Google Docs, Google Sheets, Google Slides, and more. It is a versatile tool that can be used for various applications, from gathering RSVPs for an event to creating a pop quiz. Figure 1.0 shows the image of Google Form.



**Figure 1.0: Google Form**

## 1.5.2 FORMIDABLE FORMS

Formidable Forms is the best WordPress forms plugin to help user get more done in less time. It offers a way to build simple contact forms or complex multi-page forms with file uploads, conditional logic and calculations. Then display collected data with views and graphs. Not many student use this form because they need to pay in order to use it and instead will find form that is free to use. Figure 1.1 shows the image of Formidable Forms.



**Figure 1.1: Formidable Forms**

## 1.5.3 TRACK SELECTION SYSTEM

Student can register and login using their matric number in track selection system. The student data will be kept in the system database and the users will be directed to the home page where they can choose and register their track easily. Because student may need to contact their academic supervisor in order to change their track, our system offer a way for student to make a appeal to change track in the home page. Users can access the system via their handheld devices.

| Form/System<br>Function | Google Form | Formidable Forms | Track Selection System |
|---|---|---|---|
| User registration and login | Yes | Yes | Yes |
| Free to use | Yes | No | Yes |
| Affordable for student | Yes | Optional | Yes |
| Require staff to create form | Yes | Yes | No |
| Usable for staff | Yes | Yes | Yes |
| Versatile | No | Yes | Yes |

**Figure 1.2: Comparison Diagram**

**1.6 METHODOLOGY**



**Figure 1.3: Agile Methodology**

**Introduction**

Methodology that is used to develop the iTrek system is Agile Methodology. This methodology been chosen because it covers the way, methods and approaches to achieve the objective and goals of this system while also determining the effective procedures for answering research problems. This chapter covers the requirement phase, design phase, development phase, testing phase, deployment phase and review phase.

**Requirement Phase**

The project title have been decided during this phase. The project title was Track selection system. The project title idea came from our former supervisor lecturer for this project and led to agreements with the group members to proposed the said title. The name for the system been decided and it is named iTrek. Moreover, the description and abstract have been discussed for the project. The Gantt chart is included as it was also necessary for the project as a reference and a guide. Preparing all the necessary to design and construct the new system during this phase.

**Design Phase**

All the requirement been discussed and design of the system must be user friendly. Additionally, finding features that can be implemented to the track selection system from the system that already existed. The system interface storyboard will also be designed in this phase.

**Development Phase**

In the devlopment phase, the design storyboard will be created in Bootstrap Studio. This is where the system interface can be seen and made adjustment to it. Then the coding will be implemented into the system. The database server in this project, the XAMPP server and Visual Studio Code will be used to develop the system. Then the system will be publish by using the Web hosting and domain for public users.

**Testing Phase**

In this phase, a test for the system will be carried out when every module has been conducted as a complete system. The test is carried out to look for errors and to make sure that the system works properly. Any bugs and errors will be corrected and fixed in this phase. The system will undergo testing until it becomes error-free and all the functions can be used.

**Deployment Phase**

In this phase, when all of the system interface and codes have complete, the system can be deployed. Once successful, the system will be made available to the user for usage as intended in the system goals and objectives.

**Review Phase**

This last phase will received reviews and comments from the users for maintenance. Any comments received can be helpful to make improvement to the track selection system. All the reviews and comments from the users and project panel will be recorded for future upgrade and improvements for the system.
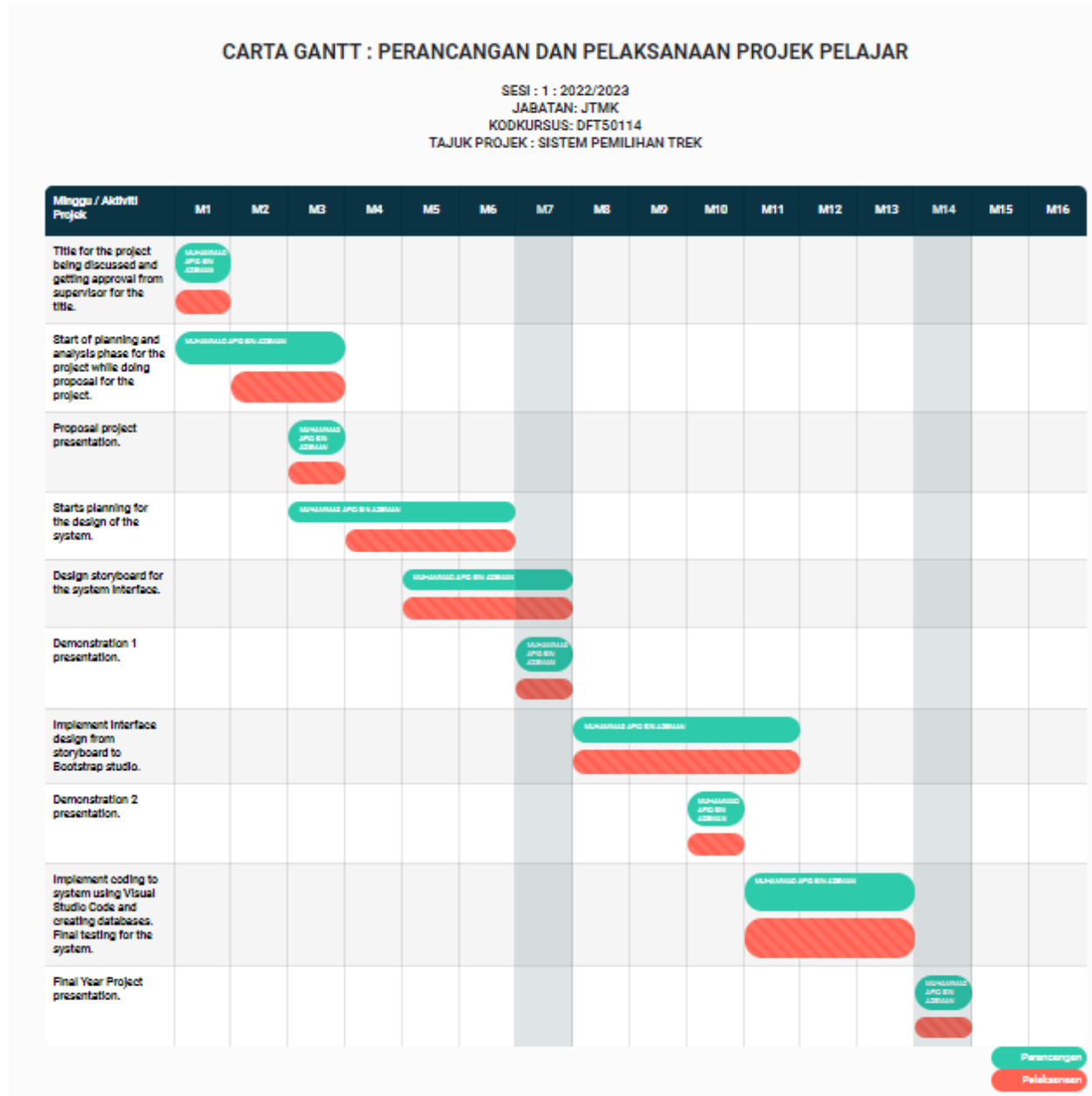
## 1.7 GANTT CHART



**CARTA GANTT : PERANCANGAN DAN PELAKSANAAN PROJEK PELAJAR**

SESI : 1 : 2022/2023
JABATAN: JTMK
KODKURSUS: DFT50114
TAJUK PROJEK : SISTEM PEMILIHAN TREK

| Minggu / Aktiviti Projek | M1 | M2 | M3 | M4 | M5 | M6 | M7 | M8 | M9 | M10 | M11 | M12 | M13 | M14 | M15 | M16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Title for the project being discussed and getting approval from supervisor for the title. | ■ | | | | | | | | | | | | | | | |
| Start of planning and analysis phase for the project while doing proposal for the project. | ■ | ■ | | | | | | | | | | | | | | |
| Proposal project presentation. | | | ■ | | | | | | | | | | | | | |
| Starts planning for the design of the system. | | | ■ | ■ | | | | | | | | | | | | |
| Design storyboard for the system interface. | | | | | ■ | ■ | | | | | | | | | | |
| Demonstration 1 presentation. | | | | | | | ■ | | | | | | | | | |
| Implement interface design from storyboard to Bootstrap studio. | | | | | | | | ■ | ■ | | | | | | | |
| Demonstration 2 presentation. | | | | | | | | | | ■ | | | | | | |
| Implement coding to system using Visual Studio Code and creating databases. Final testing for the system. | | | | | | | | | | | ■ | ■ | | | | |
| Final Year Project presentation. | | | | | | | | | | | | | | ■ | | |

Perancangan
Pelaksanaan

**Figure 1.4: Gantt Chart**

# 2.0 REQUIREMENT SPECIFICATION

## 2.1 FUNCTIONAL REQUIREMENT

i.   **Display student list**

All the student who have chose a track will be displayed in our system.

ii.  **Select track menu**

Student can choose between two track.

iii. **Confirmation for track selection before submitting**

Student will given a confirmation pop up before submitting. For example, a pop up asking "are you sure?" will be displayed and student need to confirm it again.

iv.  **Result checking**

Student may check for their track result after submitting.

## 2.2 NON-FUNCTIONAL REQUIREMENT

i.   **Security**

Student data is secured safely.

ii.  **Usability**

The system can be used by both student and staff members.

iii. **Performance**

System run well on one platform will be smoothly converted to run on another platform.

iv.  **Maintainability**

The system is maintained by staff. The database is maintained using a commercial database.

v.   **Availability**

The system will always be accessible. A web browser can be used by client to access it.

## 2.3 HARDWARE AND SOFTWARE REQUIREMENT

### Table 1.0: Hardware Requirement

| HARDWARE | DESCRIPTION |
| --- | --- |
| Laptop | Use to display the system frontend. |

### Table 1.1: Software Requirement

| SOFTWARE | DESCRIPTION |
| --- | --- |
| Bootstrap Studio | Use to design the frontend of the system |
| Visual Studio Code | Use as a code editor for the programming when the system is being developed. |
| GitHub | Provides a code hosting platform for collaboration and version control. GitHub lets us to work together on iTrek projects |
| XAMPP | Use for the localhost server and MySQL database server |
| Web Hosting | Use to publish the system to Public user |
| Domain | Use to let Public user to find the system in we addresses |

## 2.4 HARDWARE AND SOFTWARE REQUIREMENT

### 2.4.1   Bootstrap Studio



**Figure 1.5: Bootstrap Studio**
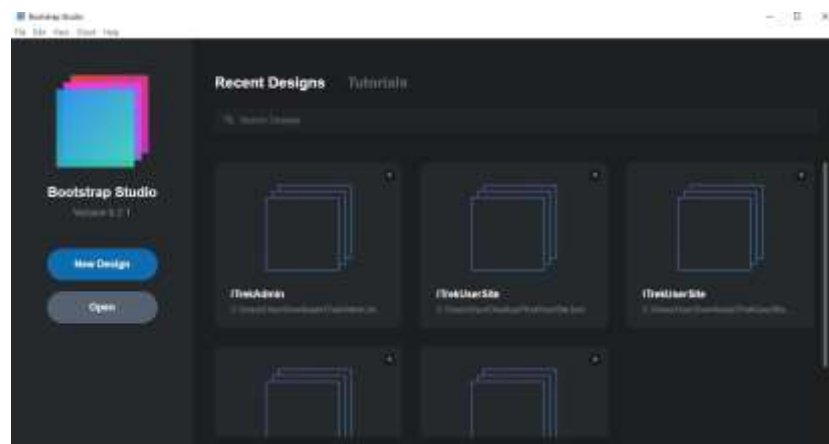


**Figure 1.6: Bootstrap Studio Preview**

i.   Step 1: Login GitHub. Bootstrap Studio can be downloaded in GitHub by register and login to GitHub. First go to GitHub Student Developer Pack.

ii.  Step 2: Find Bootstrap Studio and click Sign in with GitHub. Save the license key and download Bootstrap Studio. Choose your OS and the version you wanted.

iii. Step 3: Run the .exe file. After downloading the software, you can begin installation by double-clicking on the file ending in .exe.

iv.  Step 4: Complete the installation procedure.

### 2.4.2 Visual Studio Code



**Figure 1.7: Visual Studio Code**
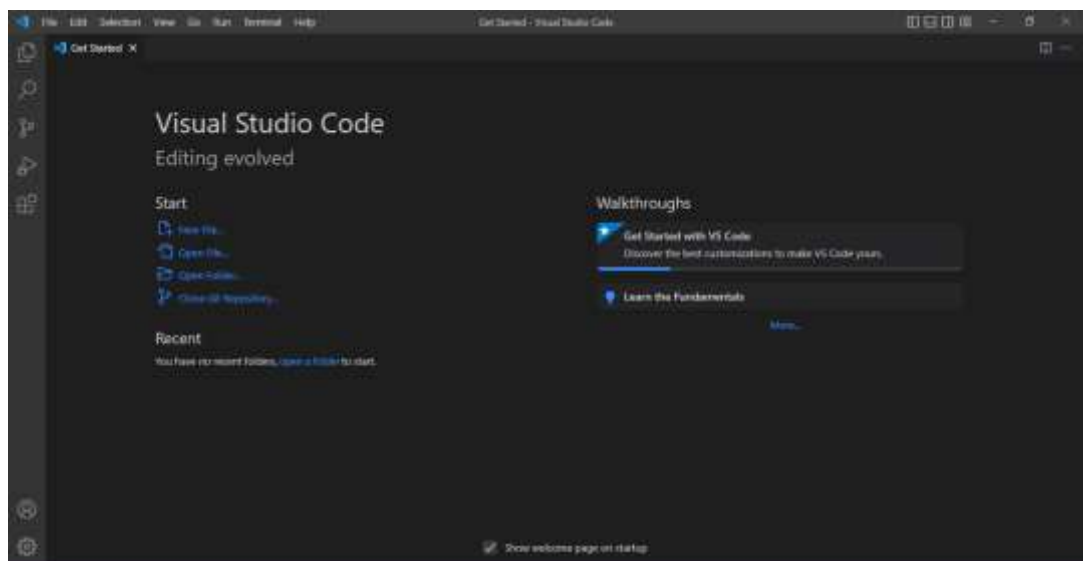


**Figure 1.8: Visual Studio Code Preview**

i.    Step 1: Login GitHub. Visual Studio Code can be downloaded in GitHub by register and login to GitHub. First go to GitHub Student Developer Pack.

ii.   Step 2: Find Visual Studio Code and click Sign in with GitHub. Save the license key and download Visual Studio Code. Choose your OS then download.

iii.  Step 3: Open the .exe file. Click I accept the agreement. Then click 'Next'.

iv.   Step 4: Select your destination location. Click 'Next'.

v.    Step 5: Select start menu folder. Click 'Next'.

vi.   Step 6: Select Additional tasks you wanted. Once you done, click 'Next'.

vii.  Step 7: Click install button.

viii.    Step 8: Once the installation is done, click the finish button.

21

### 2.4.3 XAMPP



**Figure 1.9: XAMPP Logo**
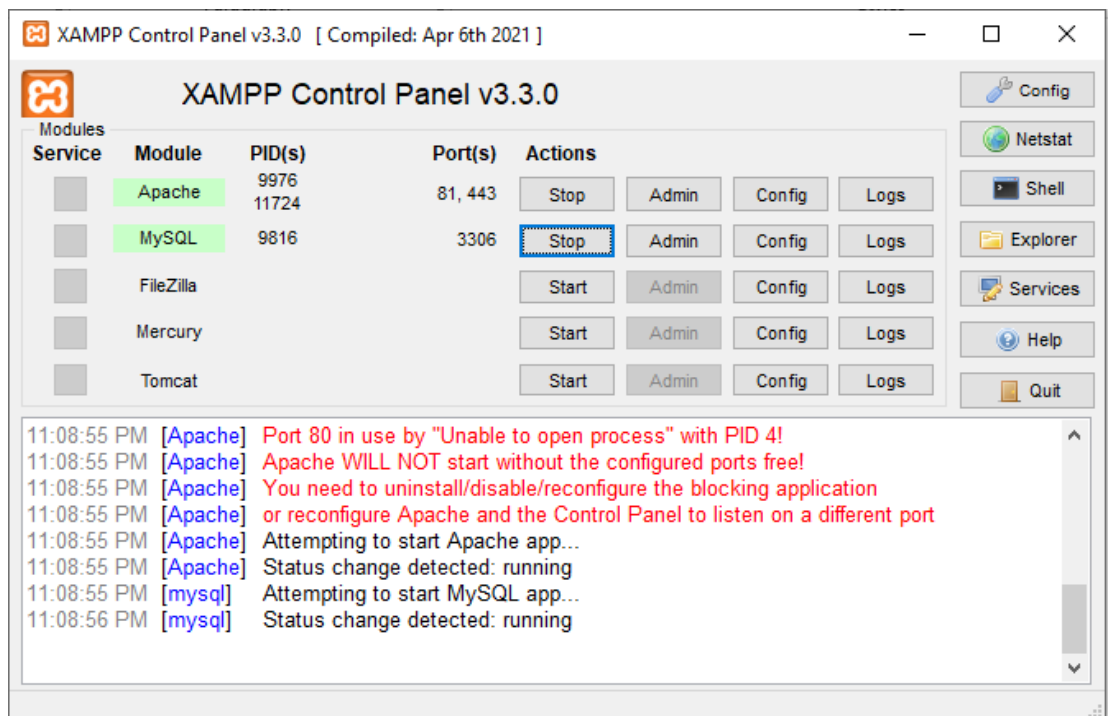


**Figure 2.0: XAMPP Control Panel**

i. Step 1: Download XAMPP at apachefriends.org and choose your OS then click download.

ii. Step 2: Run .exe file. After downloading the software bundle, you can begin installation by clicking the .exe file.

iii. Step 3: If you have any problems, turn off any antivirus software. This is because an active antivirus program can interfere with the installation process.

iv. Step 4: Deactivate UAC. User Account Control (UAC) restricts writing access to the C: drive which is why we recommend you disable it for the duration of the installation. You can go to the Microsoft Windows support pages to learn on how to disable your UAC.

v. Step 5: Begin the installation wizard. Configure the installation parameters then click the next button.

vi. Step 6: Select software components. It is recommended to install with the usual setup and all accessible components. Click the next button.

vii. Step 7: Select the installation directory. If you choose the basic setup, aa folder called xampp will be created under C: for you. Click the next button.

viii. Step 8: Begin the installation procedure. Once you have decided on all of your settings, click to begin the installation. The setup wizard will unpack and install the chosen components before saving them to specified directory.

ix. Step 9: Complete installation. Once all the components ins installed, you can exit the setup process by selecting the 'Finish' button. Once the installation complete, you can search XAMPP Control Panel in your pc search bar and open it.

## 2.5 SECURITY REQUIREMENT / EXCEPTIONAL HANDLING

A security requirement including dealing with data integrity, authentication, erroneous password lockouts and access control is a statement of needed security that ensures one of many different security properties of software is being satisfied.

In our Track Selection System, staff such as lecturer of *Politeknik Seberang Perai* (PSP) required an authorized username and password to login in order to access to the Admin page. Student cannot login to the admin page as the username and password will only be given to the staff members.

Besides, we also enabled password encryption for our system in the database server. This means that when a student create an account, the sever will scrambles the password so it is unreadable. This way we can prevent from third party to access to the system.
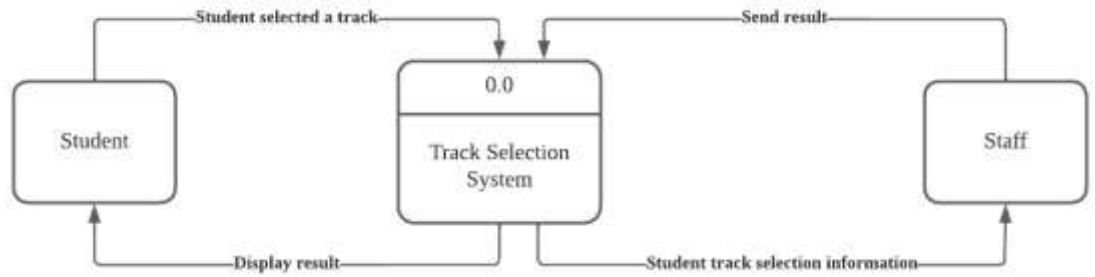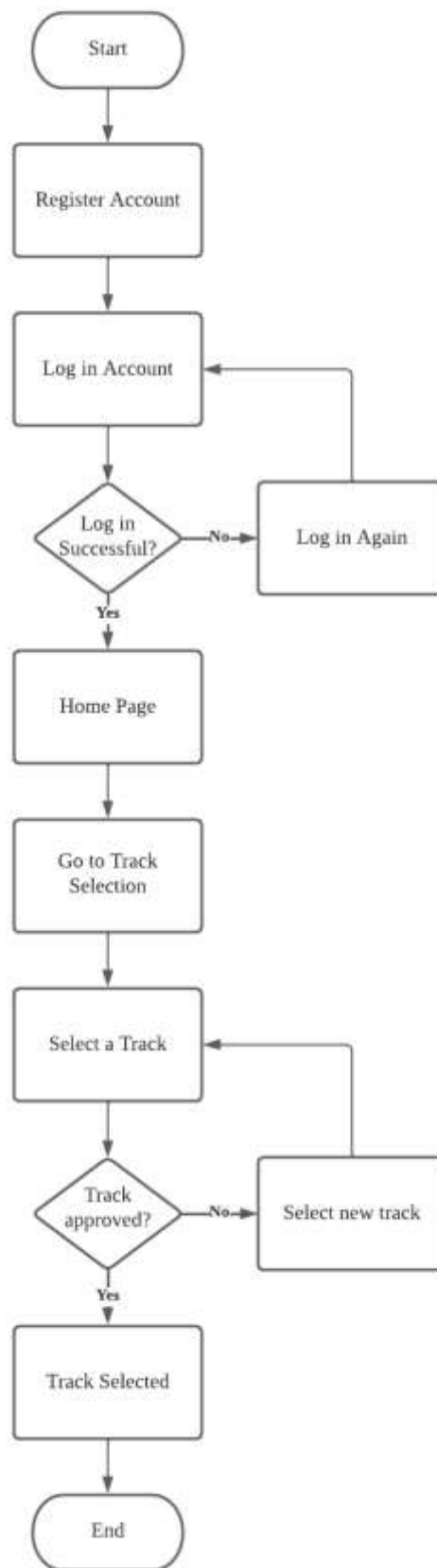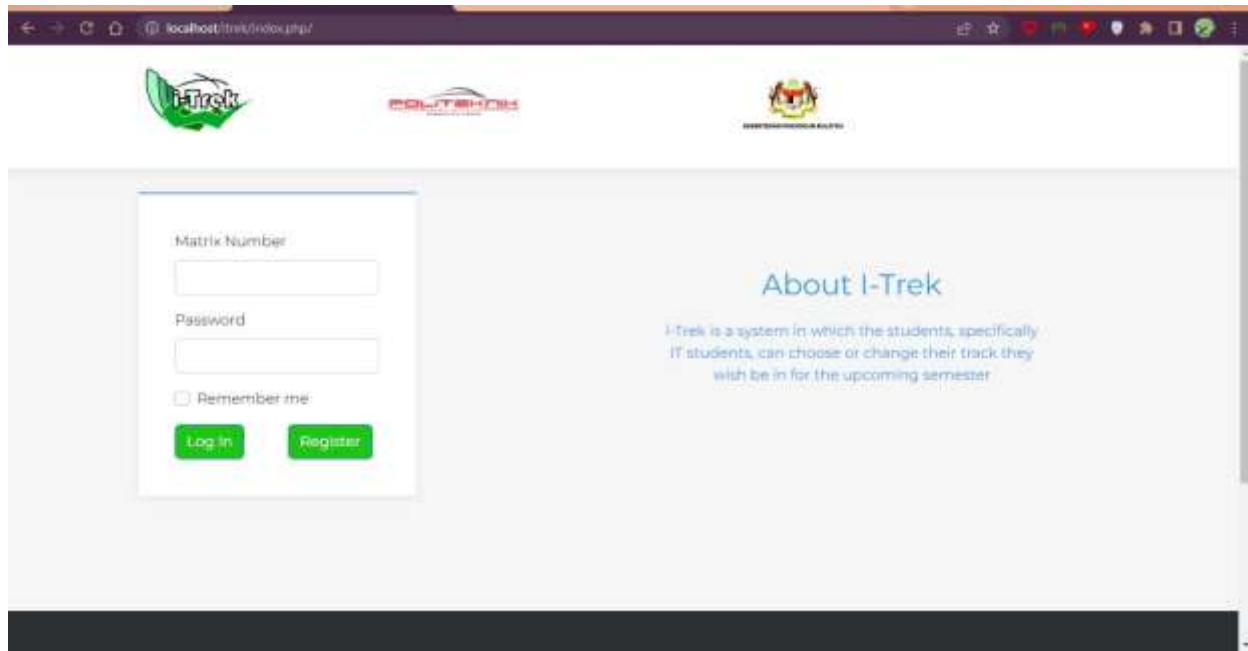
# 3.0 FINAL DESIGN
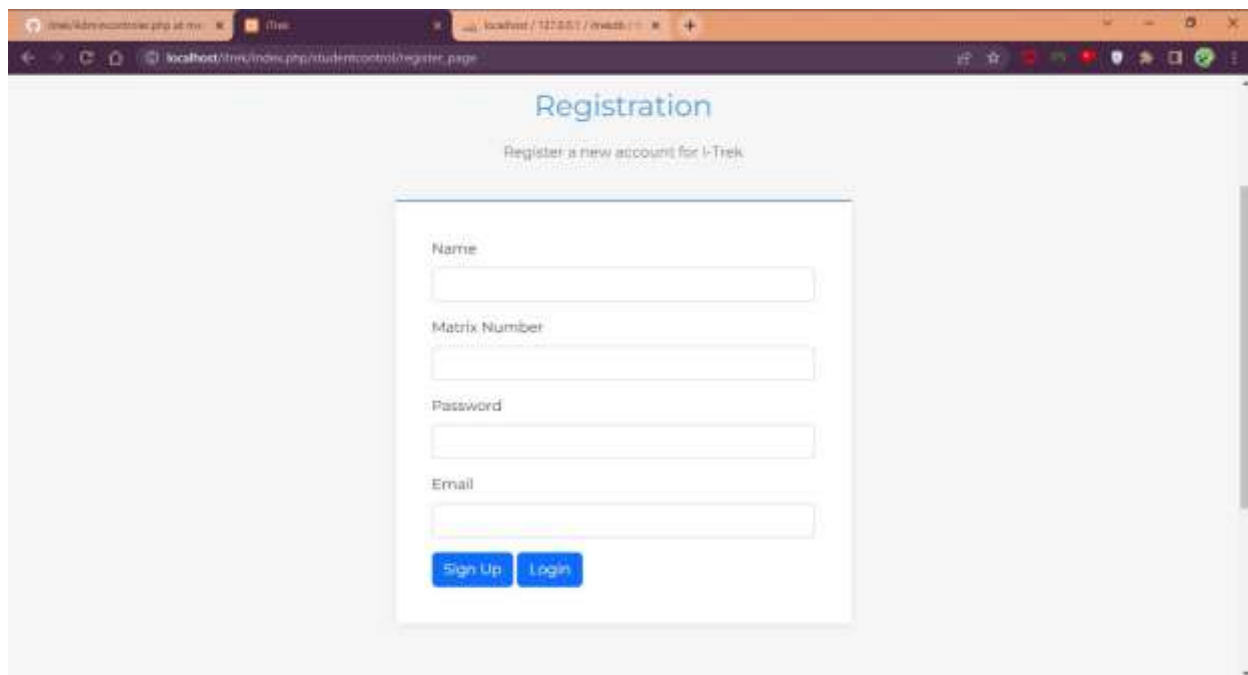
## 3.1 LOGICAL DESIGN



**Figure 2.1: Context Diagram**

**Figure 2.2: Flowchart**

**3.2 PHYSICAL DESIGN**
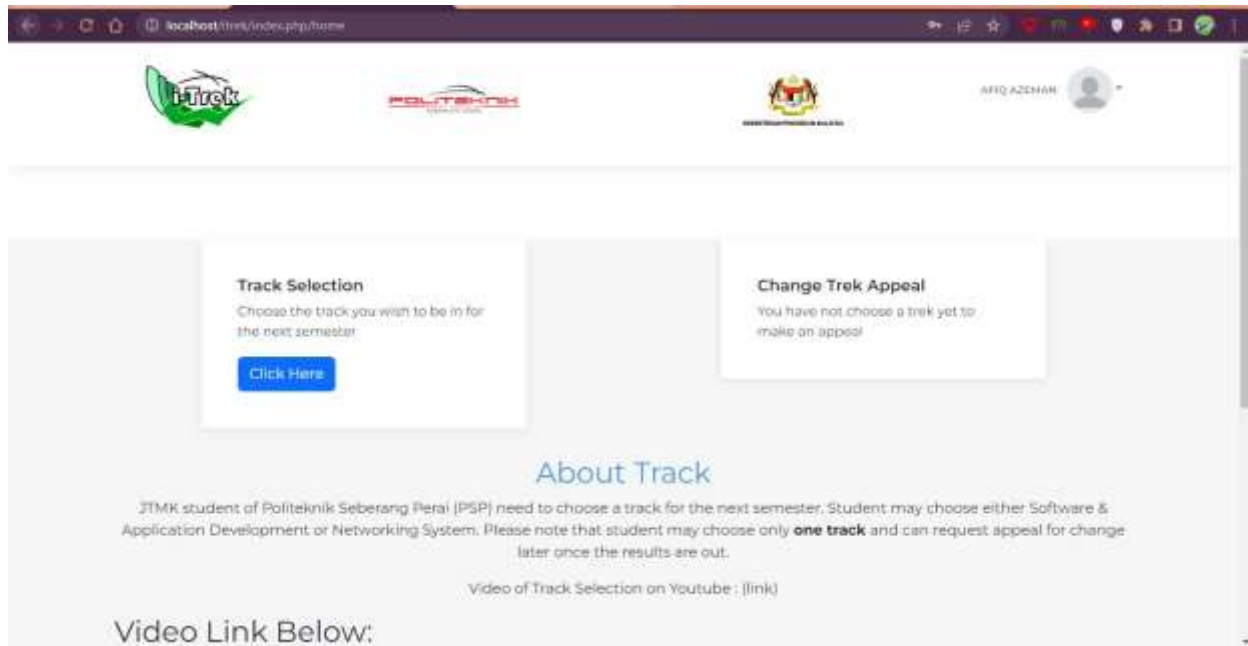


Figure 2.3: Login Page
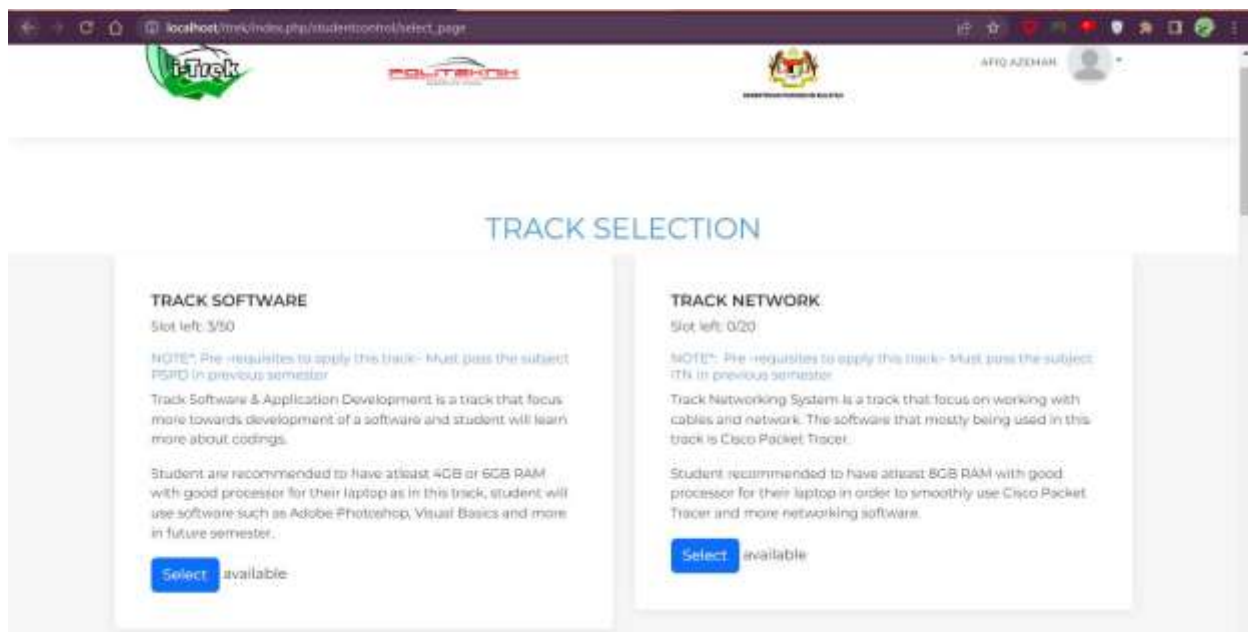


Figure 2.4: Register Page

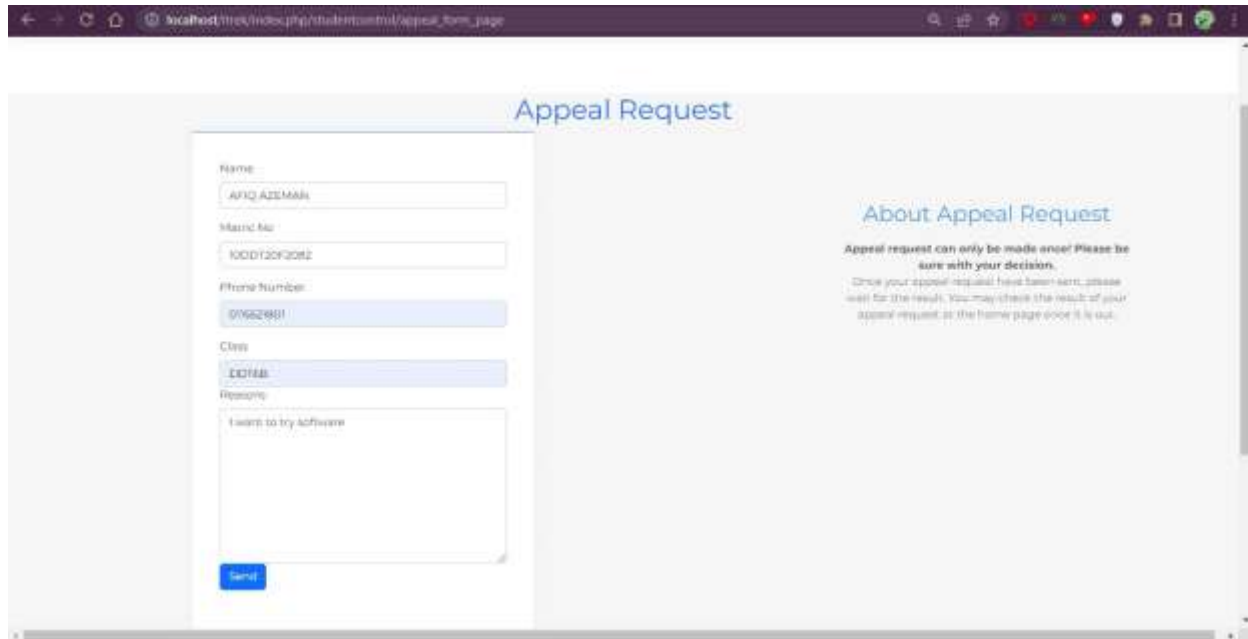**Figure 2.5: Home Page**



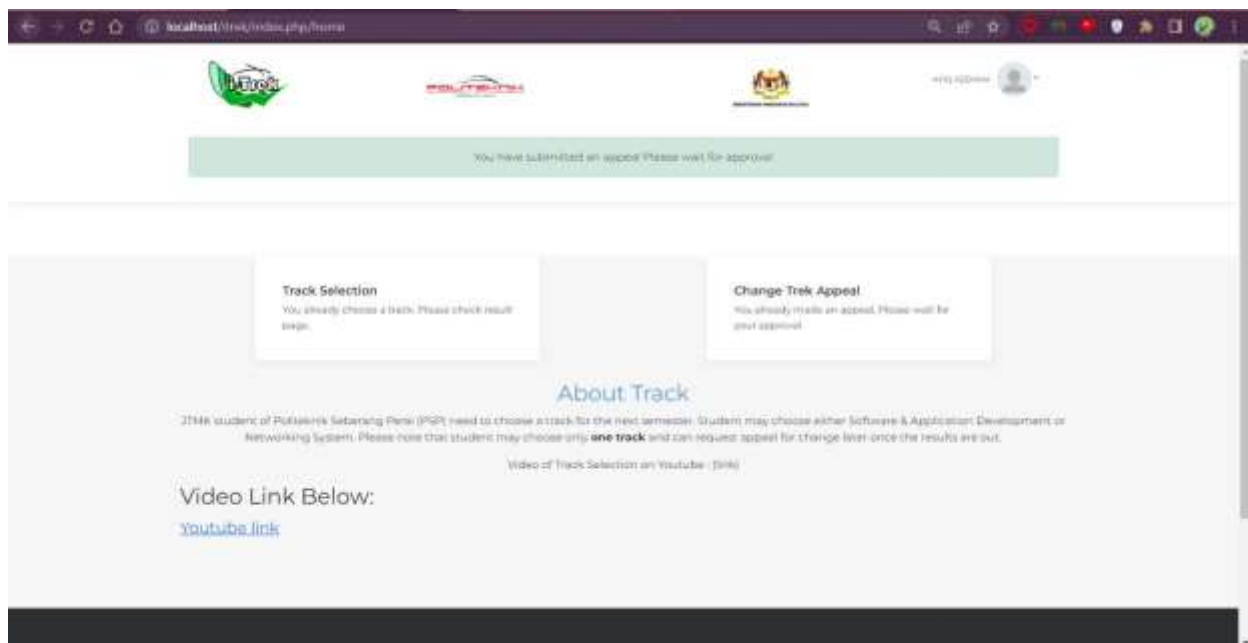**Figure 2.6: Track Selection Page**

**Figure 2.7: Appeal Request Page**



**Figure 2.8: After select a track or make a appeal page**

**Figure 2.9: Result Page**
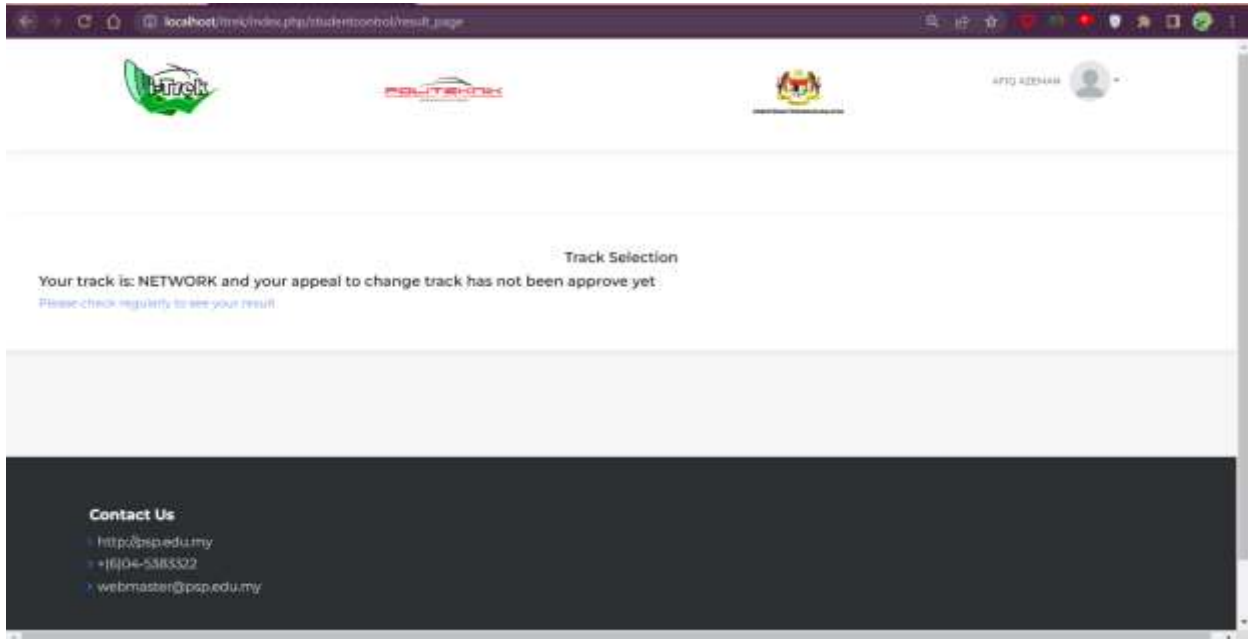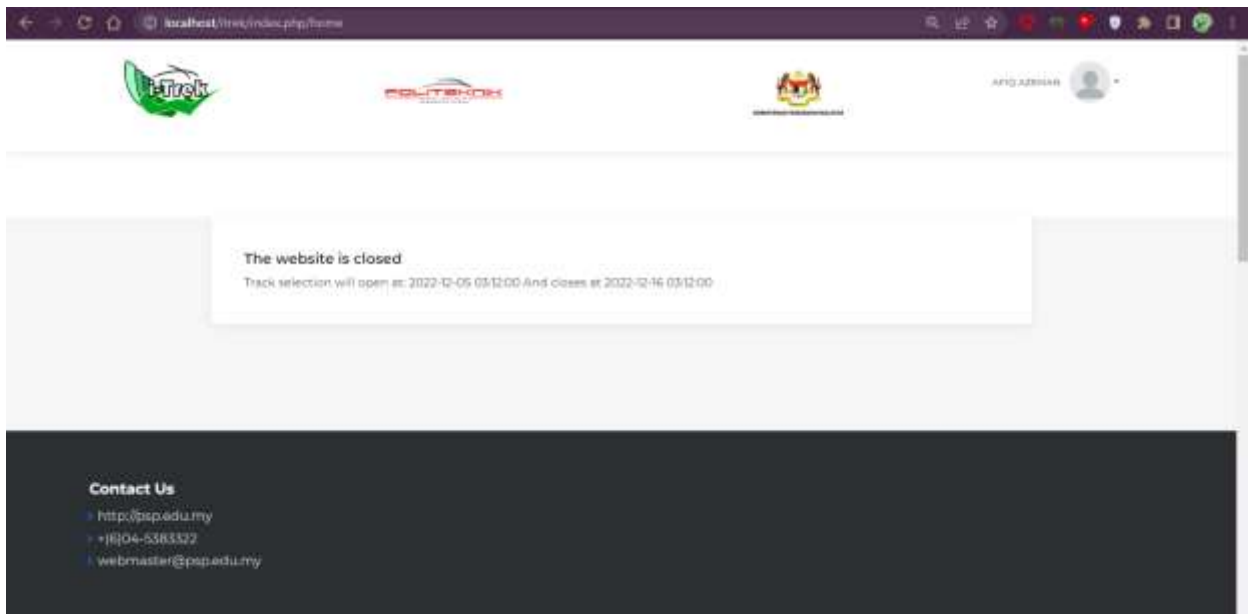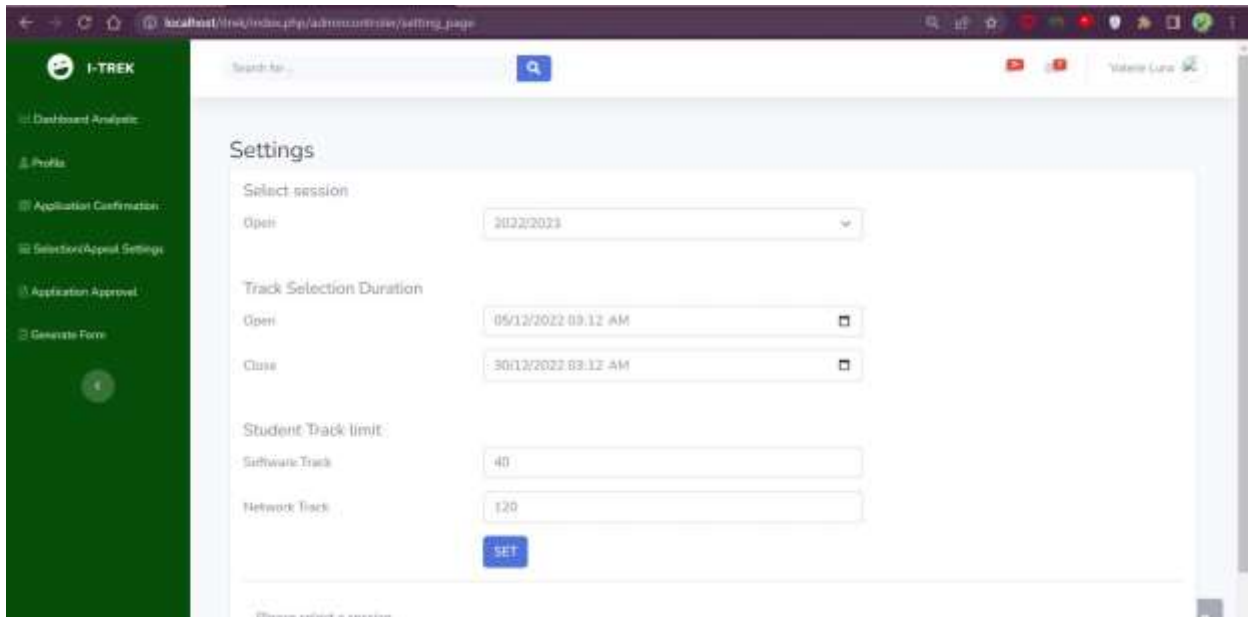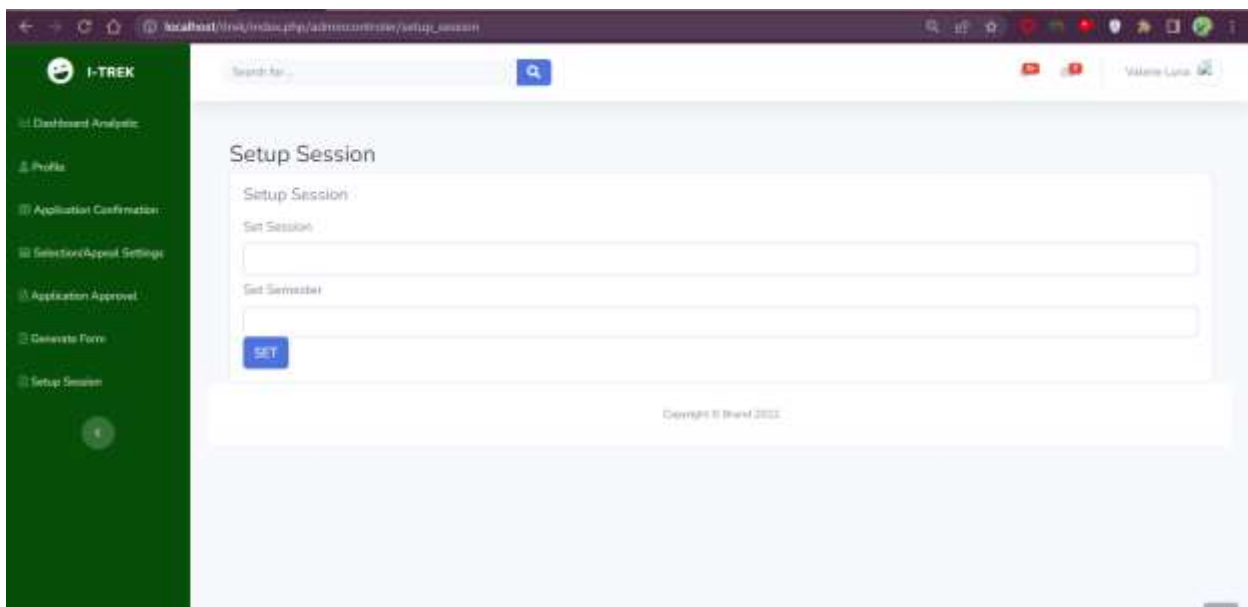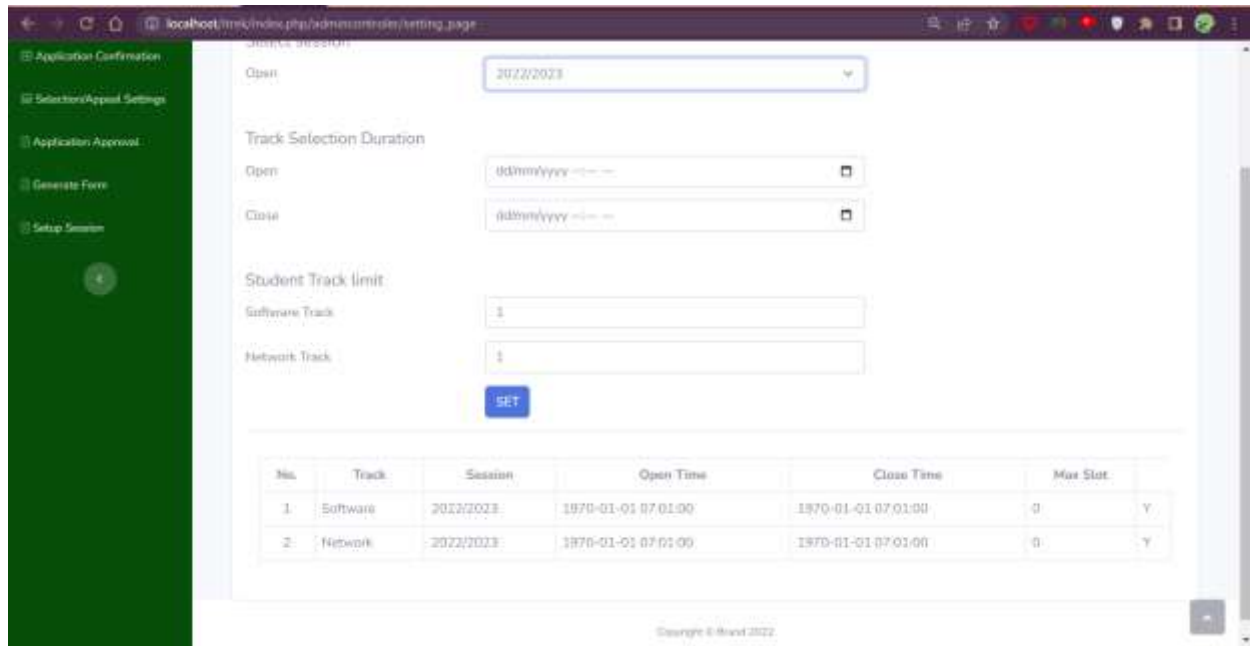


**Figure 3.0: Closed system page**

**Figure 3.1: Admin settings page**



**Figure 3.2: Admin Setup Session page**

**Figure 3.3: More Admin Setup Session Page**

# 4.0 TEST DESCRIPTION AND RESULTS

## 4.1 UNIT TESTING

### 4.1.1 UNIT TESTING PLAN (STUDENT'S INTERFACE)

**Table 1.2: Unit Testing Plan (Student's Interface)**

| UNIT TESTING PLAN (UTP) (STUDENT'S INTERFACE) | | | | | | |
|---|---|---|---|---|---|---|
| No. | Test Case Name | Test Procedure | Pre-condition | Expected Result | Tester | Result (Pass / Failure) |
| 1. | Login page | Student are require to enter their matric number and password. | Student are required to enter their correct matric number and password. | When login success, it will redirect student to home page. | Muizz | Pass |
| 2. | Register page | Student are require to fill the required box to register. | When student done registering. They will redirected to login page | Student will redirected back to login page | Muizz | Pass |
| 3. | Home page | Student choose to register track or make appeal change track. | Student need to choose track first before can make appeal | Student redirected to track selection page when click Track selection button | Azim | Pass |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4. | Logout | Student can click the logout button on the dashboard to logout. | Home page will be logout and redirect to login page. | None | Afiq | Pass |
| 5. | Track Selection page | Student will choose a track they want. | A message box will appear asking student to confirm their decision. Student click confirm. | Message box appear saying track register successful. | Azim | Pass |
| 6. | Home page after a track is selected | Change track appeal have opened. | Student need to wait for their track result. | Display student track that have been selected. | Afiq | Pass |
| 7. | Appeal Change Track Page | Student can change track by make an appeal. | Student need to fill the required info to complete the appeal. | Message box appear saying appeal is recorded. | Afiq | Pass |
| 8. | Home page after appeal | Student appeal have been recorded. | Student need to wait for the appeal result. | Display the selected track and appeal. | Azim | Pass |
| 9. | Close page | System will not be open until the set date. | Student have to wait for the system to be open by admin. | Display the date when the system is open and close. | Muizz | Pass |

**4.1.2 UNIT TESTING PLAN (ADMIN'S INTERFACE)**

**Table 1.3: Unit Testing Plan (Admin's Interface)**

| No. | Test Case Name | Test Procedure | Pre-condition | Expected Result | Tester | Result (Pass / Failure) |
|---|---|---|---|---|---|---|
| UNIT TESTING PLAN (UTP) | | | | | | |
| 1. | Login page | Admin are required to fill the username and password. | Admin have to enter the correct username and password. | When admin login, it will redirected to admin page. | Muizz | Pass |
| 2. | Logout | Admin can click the logout button to exit from login page. | Admin page will be logout and redirect to login page. | None | Afiq | Pass |
| 3. | Dashboard page | Admin can view the statistics in this page. | Statistics will change depend on students data. | None | Azim | Pass |
| 4. | Application confirmation | Admin can view list of student who already choose a track. | Admin can approve or denied the track for the student. | Display list of student that choose track already. | Muizz | Pass |
| 5. | Selection/ appeal | Admin can open and close | Admin will set open and close | None | Afiq | Pass |

| | | setting | track selection. | date for the system. | | | |
|---|---|---|---|---|---|---|---|
| 6. | Applicati on Approval | List of student who make an appeal to change track are displayed. | Admin can approve or reject student appeal. | List of student are displayed in this page. | Azim | Pass |
| 7. | Generate Form | A form will be displayed for student to fill. | Admin will approve track once the form have been filled by student. | None | Muizz | Pass |

**4.2 USER ACCEPTANCE TEST**

**4.2.1 USER ACCEPTANCE TESTING (STUDENT'S INTERFACE)**

Table 1.4: User Acceptance Testing (Student's Interface)

| No. | Test Case Name | Acceptance Requirement | Test Result | | Tester | Comments |
|---|---|---|---|---|---|---|
| | | | Pass | Fail | | |
| 1. | Login button | Student need to login in order to redirect to the home page. | Pass | | Muizz | Easy to use. |
| 2. | Register page | Student need to register to create an account | Pass | | Azim | Excellent. |
| 3. | Home page | Student can choose track or make an appeal | Pass | | Afiq | The page is user friendly. |
| 4. | Logout | Student can logout by clicking the logout button. | Pass | | Muizz | Button works. |
| 5. | Track Selection page | Student can choose between two tracks | Pass | | Afiq | Good. |
| 6. | Home | Change track | Pass | | Azim | Excellent. |

| | | | | | | |
|---|---|---|---|---|---|---|
| | page after track a track is selected | appeal have opened. | | | | |
| 7. | Appeal Change Track page | Student can change track by make an appeal. | Pass | | Muizz | Good. |
| 8. | Home page after appeal | Student appeal have been reorded. | Pass | | Afiq | Good. |
| 9. | Close page | System will not be open until the set date. | Pass | | Azim | Exceellent. |

**4.2.2 USER ACCEPTANCE TESTING (ADMIN'S INTERFACE)**

**Table 1.5: User Acceptance Testing (Admin's Interface)**

| No. | Test Case Name | Acceptance Requirement | Test Result | | Tester | Comments |
|---|---|---|---|---|---|---|
| **USER ACCEPTANCE TESTING (UAT)** **(ADMIN'S INTERFACE)** | | | | | | |
| | | | Pass | Fail | | |
| 1. | Login Page | Admin are required to fill the correct username and password. | Pass | | Muizz | Works as intended. |
| 2. | Logout | Admin can logout by clicking the logout button | Pass | | Azim | Excellent. |
| 3. | Dashboard | Admin can view the statistics in this page. | Pass | | Afiq | Good. |
| 4. | Application Confirmation | Admin can view list of student who have selected a track. | Pass | | Muizz | Good. |
| 5. | Selection/Appeal setting | Admin can open and close track selection. | Pass | | Afiq | Good. |
| 6. | Application Approval | List of student who make an appeal to | Pass | | Azim | Excellent. |

| | | change track are displayed. | | | | |
|---|---|---|---|---|---|---|
| 7. | Generate Form | A form will be displayed for student to fill. | Pass | | Muizz | Good. |

# 5.0 MAJOR FINDINGS AND DISCUSSIONS

## 5.1 ADVANTAGES OF THE PROJECT

This system has its own advantages and those are:

i. **Time Management**

   This system is built to save students time to register and choose track. This is because they can just log in and then choose the track that they wanted.

ii. **Staff Satisfaction**

   The system will ease the work of PSP staffs because students data will be recorded in the system and can be view more easily. This will lead to improve job satisfaction.

iii. **Keep record systematically**

   PSP staffs can keep records of students data systematically as it is kept in the system itself and do not have to worry about losing it.

## 5.2 LIMITATIONS OF THE PROJECT

i. **Need to Maintain Properly**

The system may need proper maintenance because it will be risky to lose the data in the system.

ii. **One Time Use**

Students will only be using this system when wanting to choose a track or make an appeal.

# 6.0 CONCLUSIONS

Technology nowadays is advancing day by day and has greatly facilitated people's lives. Many system have been developed for users to use and have made their daily lives easier. It is also time for PSP to implement another such system which will benefits the students.

Student may find it difficult at first when using the system. But with the academic supervisor help, it will be easier to understand and use. The more student that use this system, the more well known the system will be in *Politeknik Seberang Perai* (PSP).

In conclusion, iTrek system will make the track selection for student much faster and easier while also helping reduce the work that need to be done by PSP staffs when they are reviewing the students track decision. This system is important for student to use in this current time and in the future.

# 7.0 RECOMMENDATIONS

We recommend that staffs of JTMK PSP should try to understand how to navigate through the admin page and how to open or close track registration date. The system is not hard to understand which means the staffs will have no problem understanding how the system works in short period of time.

The students should refer to their Academic Advisor if they have any problems with using the system. Other than that, the interface for student page is simple and easy to navigate through. There should be no problem using the system and student can register and select their track easily.

# REFERENCES

Jotform. (2022). Microsoft Forms vs Google Forms: Which one is better?. Published on Feb24, 2022.

Andrew Zola (August 2022). What is Bootstrap. WhatIs.com.

YOUNG ENTREPRENEUR COUNCIL (APR 6, 2022). How to Bootstrap a Digital Venture Studio Using the Agency Model.

Osama Tahir (Oct 25,2022). NEW! 7+ Best Google Forms Alternatives [With Advanced Features].

Rashmi Sharma (February 23rd 2020). 8 Popular PHP Frameworks For Web Development in 2020. 2. CodeIgniter PHP Framework for Beginners.

David Ramel (12,14,2022). VS Code Preview: Python in the Browser, Executed by WebAssembly.

Abigail Absamis Damerest (Jan 23,2021. 1:02AM) What are Google Forms? Everything you need to know about Google Workspace's online form builder.

ClickDripTeam (April 7,2022) 13 Advantages and Disadvantages of Google Forms. Summary: Google Form Pros and Cons.

ReQtest (5th April 2012) Why is the difference between functional and Non-functional requirements important?.