Project Report

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| Project Title | Application Integration - API |
| Qualification Name (NICF) |  |
| Product Name |  |
| Module Name (NICF) | Application Integration (API using Spring Boot & Reactjs) |

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| Student name | | Assessor name | |
| Francis Roel L. Abarca | |  | |
| Date issued | Completion date | | Submitted on |
| May 29, 2023 | May 31, 2023 | | June 5, 2023 |
|  | |  | |
| Project title | Application Integration -API | | |

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| Learner declaration |
| I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.  Student signature: Date: 5/29/2023 |

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Project Background

The client for ABC Neighbourhood has tasked you to implement a revision of your Know Your Neighbourhood project. The project’s requirement are as follows:

* The backend should utilize the Spring boot and JPA frameworks.
* Using the Restful Web Services to develop the API.
* Creating the front-end of the webpage using React.js.
* Identify the existing APIs available and their uses on the application.

**2. Project Objective**

The objectives of this project include the following:

* The Users should be able to perform the following functions:
  + User should be able to log-in using the provided APIs
  + Users are required to provide the existing username and password for the API and can login to the application.
* Tools and Platforms
  + Jetbrains IntelliJ IDEA Ultimate
  + Spring Tool Suite
  + MySQL Server
  + Visual Studio Code
  + Node.js
  + Mozilla Firefox
  + Google Chrome
  + React Developer Tools
  + Microsoft Hyper-V
  + Microsoft Word
  + Microsoft PowerPoint

**3. Project Requirement Specifications**

**3.1. Project Scope**

You have already developed a "Know-Your-Neighborhood" application. The goal of this application is to provide login/sign up using existing API. For this to happen, the application should have login button with available APIs.

The Know-Your-Neighborhood website consists of the following Key pages:

1. Home Page

2. Registration Page

3. Login Page with API link

4. Contact us Page

5. About us Page

6. Terms and Conditions Page

Customers can login using the existing API and fetch basic information such as name, email from API.

**4. Task 1**

**Task Statement:**

Create the following items Under **“APIs and Types of APIs”** in Project Presentation.

1. Explain what API is, its role and need for API and research existing APIs.

2. Examine the relationship between API and SDK.

3. Identify types of API and its uses.

4. Identify the potential security issues with API and critically evaluate the suitable API for given scenario or your selected application.

**Solution:**

1. **Explain what API is, its role and need for API and research existing APIs.**
2. What is API?
3. Its Role
4. Need for API

* Improved collaboration:

1. Example APIs for mobile, desktop, Web APIs.
2. **Examine the relationship between API and SDK.**
3. **Identify types of API and its uses.**
4. Examine different APIs
5. Examine the uses of APIs for a particular type
6. **Identify the potential security issues with API and critically evaluate the suitable API for given scenario or your selected application.**
7. Identify potential security issues with API

* Injection Attack
* DDoS Attacks
* Broken Authentication
* Sensitive Data Exposure
* Broken Access Control
* Parameter Tampering
* Man-In-The-Middle-Attack (MITM)

1. Evaluate potential security issues in a suitable API of Know-Your-Neighborhood

* **Injection:**
* **Broken User authentication:**
* **Broken access control/authorization**
* Suitable API for given scenario