

**Rheabel P. Pineda**

**BSIT 3E**

### **Test Procedure Documentation**

#### **Objective:**

The goal of the performance test is to assess the system's ability to retrieve, organize, and present backend course information according to specified criteria.

#### **Test Steps:**

The test procedure began with the installation of the MongoDB Database Tool, essential for managing the database. This step required downloading the tool from the provided link and meticulously following the installation instructions. Subsequently, a backend API endpoint was established using a specific command to import the course data into the MongoDB database.

The test scenarios included retrieving all backend courses and arranging them alphabetically, extracting and listing the name and specialization of each course, and retrieving all BSIS and BSIT courses from the curriculum. Data validation was crucial at every step to ensure accuracy, including verifying alphabetical order, correct extraction of names and specializations, and accurate retrieval of BSIS and BSIT courses.

#### **Challenges Faced:**

Several challenges were encountered during the testing process. MongoDB installation issues arose due to compatibility issues, which were resolved by carefully following the installation guide and ensuring system compatibility. Data validation complexities emerged, particularly with handling special characters in course names, prompting the need for more thorough testing and enhanced validation checks.

Another significant challenge was the slow internet connection experienced during the activities. This hindered the speed of data retrieval and validation processes, necessitating patience and efficient time management to mitigate its impact on the testing schedule. Furthermore, challenges were faced in effectively handling errors and debugging issues in the application code, leading to delays in troubleshooting and resolving issues.

**Solutions Implemented:**

To address these challenges, I implemented several solutions; Firstly, I conducted a thorough review of the MongoDB installation guide to address any installation problems. By ensuring that each step was followed correctly, I successfully resolved compatibility issues and completed the installation process.

Secondly, I improved the validation approach by adding more tests and enhancing the handling of special characters in course names. These improvements significantly increased the accuracy of the data validation process.

Thirdly, I optimized my internet connection by limiting other bandwidth-consuming activities and scheduling downloads and updates during optimal times. This optimization greatly improved the speed and reliability of my internet connection during project activities.

Lastly, to manage the time constraints effectively, I implemented a comprehensive time management strategy. This involved prioritizing tasks based on their importance and urgency, and allocating sufficient time to each activity. As a result, I was able to complete tasks efficiently and meet project deadlines successfully.