**SOFTWARE QUALITY ENGINEERING**

**PROJECT PHASE 1**

**TASK NO 3**

**“COMPARISON REPORT”**

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## **Introduction**

## In this task, we aim to assess different test management tools and have opted for a spreadsheet-based approach for test case management. We did explore other tools but found various limitations with those alternatives.

## **Tools Exploration**

### **1. Traditional Tools**

#### **Excel Sheet**

* **Findings:**

A comfortable and flexible environment for managing test cases is provided by Excel sheets. They are ideal for simpler projects and uncomplicated test case tracking despite lacking advanced functionality.

* **Advantage:**
  1. Familiarity.
  2. Adaptability.
  3. Inexpensive.
  4. Easy to use
  5. No extensive research required to use
* **Cons:**
  1. Manual updates required
  2. Time taking
  3. Scalability challenges for larger projects.

#### **Google Sheets**

* **Findings:**

Google Sheets provide online collaboration feature, making it more versatile than Excel. They are suitable for small to medium-sized projects but it is not as strong as excel.

* **Advantage:**
  1. Online collaboration supported
  2. Inexpensive tool
  3. Easy to use
  4. Highly compatible and software integrations
* **Cons:**
  1. Limited test management features
  2. Not ideal for large-scale projects.

### **2. Modern Management and Documentation Tools**

#### **JIRA**

* **Findings:**

**JIRA** is an effective tool for managing issues and projects, however it could need extra add-ons for in-depth test case management; these add-ons might be expensive.

* **Advantage:**
  1. Advanced project management
  2. Extensive integrations.
  3. Various Customizations
  4. Agile Support
* **Cons:**
  1. Additional add-ons may be required
  2. Complex and difficult to understand for new users.
  3. Very Costly to use
  4. Resource Intensive

#### **Notion**

* **Findings:**
* Even though Notion is a flexible all-in-one workspace, it lacks specialized test management functionality.
* **Advantage:**
  1. Highly Collaborative
  2. Flexible structure.
  3. Versatile to use
  4. Easy to document
* **Cons:** 
  1. Doesn't have any specialized test management features.
  2. Limited features
  3. Complex when used for larger projects
  4. Costly

### **3. Open-Source or Freemium Tools**

#### **Test Link**

* **Findings:**

This tool requires a separate server because it is open-source. Since our project is small and budget-dependent, it might not be possible for us because we can't afford a separate server.

* **Advantage:**
  1. Easy to record all actions
  2. Easy to execute tests
* **Cons:**
  1. Limited Scalability.
  2. Limited Collaboration
  3. Difficult UI

## **4. Selection of Test Management Approach**

### After weighing the alternatives, our team decided to use Microsoft Excel for test case management in our project because of its affordability, familiarity, scalability, and simplicity. Although it lacks sophisticated automation and reporting, it gives us the freedom to arrange our test cases and plans however we see fit.

### **Test Management Framework Setup**

***Chosen Tool: Microsoft Excel***

After consideration and collective meeting with the group we have decided to use Excel for extensive test case management.

#### **HOW TO USE?**

We created a dedicated Excel workbook for our test case management. We established separate sheets for test plans, test cases, and test execution results. Columns:

* + **Test Case ID:** A unique identifier for each test case.
  + **Test Case Name:** A descriptive title for the test case.
  + **Description:** Detailed information about the test case.
  + **Expected Results:** What is expected to happen when the test is executed.
  + **Status:** To track whether the test has been executed and its result.
  + **Comments:** Any additional notes or comments related to the test case.

