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For

# My Uni Guide



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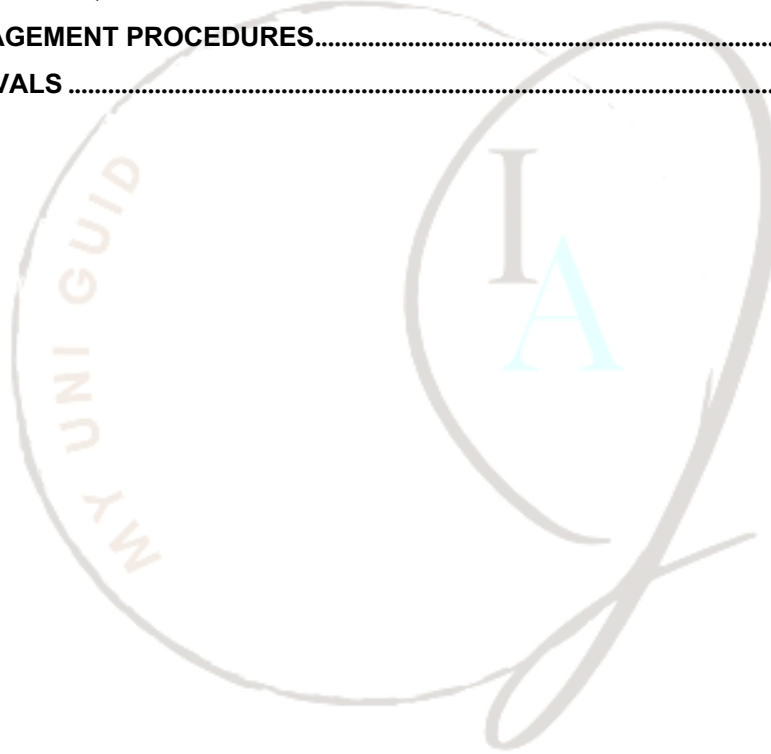
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# 1. INTRODUCTION

The purpose of this document, Software Test Plan (STP) is designed to prescribe the scope, approach, resources, and schedule of all testing activities. The plan must identify the items to be tested, the features to be tested, the types of testing to be performed, the personnel responsible for testing, the resources and schedule required to complete testing, and the risks associated with the plan. A full testing cycle is essential for delivering the perfect system and meeting customer requirements. When creating a software test plan, it is essential to test every aspect of the system. The purpose of this document is to describe the method used to test the My Uni Guide platform. Which include objective, testing strategy, scope, definition, acronyms, and references.

## 1.1 Objectives

The aim of Software Test Plan (STP) document is to determine and clarify the ways of implementing all types of testing (mentioned in the Scope). Furthermore, illustrate Pass / Fail Criteria by determining suspension criteria, resumption criteria and approval criteria. Also, mention the Resource that should be used such as Hardware, Software, Servers, Network, Tools, and team members. Moreover, determine Schedule (time each test task will take), Environmental Requirements, Change Management Procedures, and Plan Approvals from all members.

## 1.2 Testing Strategy

The Software Test Plan (STP) document used by OAAO platform to set a detailed plan for testing the system. Section 2 presents Test Items that checks if the system's various items met GUI requirements. Section 3 and 4 presents the functional requirements that will be tested and the functional requirements that won't be tested. Section 5 contain a detailed discussion about testing parts. Section 6 presents Pass / Fail Criteria by specify suspension criteria, resumption criteria and approval criteria. Section 7 discusses Testing Process which contain test deliverables, testing tasks, responsibility, resources, and schedule. Section 8 presents hardware, software, security, tools, publications, risks, and assumptions to state the Environmental Requirements. Section 9 discusses Change Management Procedures, and section 10 present the Approve from all members for the plan.

## 1.3 Scope

The Software Test Plan document will cover all test stages. Testing will be various depending on the element and type. Such as Components testing, Integration Testing, Conversion Testing, Job Stream Testing, Interface Testing, Security Testing, Recovery Testing, Performance Testing, Regression Testing, Acceptance Testing, and Beta Testing. In addition to clarify some features won't be tested.

## 1.4 Reference Material

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- [2] Additional information Notes on contributors Karl D. Majeske Dr. Majeske is an Assistant Professor of Quantitative Methods Management in the School of Business Administration. His email is majeske2@oakland.edu. (no date) *Approval criteria for Multivariate Measurement Systems*, Taylor & Francis. Available at: <https://www.tandfonline.com/doi/abs/10.1080/00224065.2008.11917721> (Accessed: October 30, 2022).
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## 1.5 Definitions and Acronyms

While this application serves IAU student data, we must first take a permit from the university to access the student database, such as the student's name, id, also the student phone number, to document it on the platform, and the reason for this process is to confirm the data of our subscribers because our program belongs to students only.

| Acronyms | Definition  |
|----------|---|
| IAU      | Imam Abdulrahman bin Faisal University              |
| UNI      | University  |
| ID       | Identification number                               |
| IEEE     | The Institute of Electrical and Electronic Engineer |
| SPMP     | Software Project Management plans                   |
| STP      | Software Test Plan                                  |
| DESC     | Description   |
| SRS      | Software Requirement Specification                  |
| SDS      | Software Design Specification                       |

Table (2)



## 2. TEST ITEMS

This section will test to affirm if all the factors in My Uni Guide, as properly as their data, databases, and interfaces, follow to that identical GUI requirements. The SRS document will be existing facts about the requirements, whereas the SDS document will comprise records about the graph and database.

### 2.1 Program Modules

All tests performed by the developer and implemented in My Uni Guide.

Program Modules are when the developer divides the program into smaller parts. Each part of the program is testable and together they form the program. The division of the program helps to manage and test each part of the system efficiently.

### 2.2 Job Control Procedures

The tester first tests each component individually, then begins sequential functionality testing, followed by interface, security, and performance testing, and finally acceptance and test cases eliminate any overlooked bugs or defects.

### 2.3 User Procedures

All procedures implemented by users in My Uni Guide are tested to ensure that all procedures are executed efficiently. All testing is discussed in Section 5 of this report.

### 2.4 Operator Procedures

The My Uni Guide platform has gone through a collection of exams to make certain that it meets consumer expectations.

These exams are Component Testing, Integration Testing, Conversion Testing, Job Stream Testing, Interface Testing, Security Testing, Recovery Testing, Performance Testing, Regression Testing, Acceptance Testing, and Beta Testing.

### 3. FEATURES TO BE TESTED

All functional criteria will be tested in this STP document, which include:

#### 3.1 Common Features:

- Login into the system.
- Forgot Password.
- Renew password.
- View and access homepage.
- Using the search bars.
- Receive notifications.

#### 3.2 Admin Features:

- Edit and manage the orders which includes add and delete.
- Manage the ads content.
- View Statical page.
- Manage student's order.
- Disable any inappropriate content.

#### 3.3 Student's Features:

- Create an account.
- Edit profile information.
- View the joined activity.
- Create and cancel orders.
- Do likes and replies on other students participation.
- Active Direct messages.

### 4. FEATURES NOT TO BE TESTED

All functional criteria features must be tested.

## 5. APPROACH

Testing is the procedure of analyzing application items in order to detect differences between current and needed conditions and in order to assess the application items ' options. This allotment offers the testing parts of the 'My Uni Guide' in detail, which are:

- Components testing
- Integration Testing
- Conversion Testing
- Job Stream Testing
- Interface Testing
- Security Testing
- Recovery Testing
- Performance Testing
- Regression Testing
- Acceptance Testing
- Beta Testing

### 5.1 Component Testing

In component testing, each component will be tested separately and In component testing, each component will be tested separately and be sure whether the outcome will be as expected. it'll aid in order to justify the part of each component in the program and clarify the issues and bugs earlier the solve it faster and easier.

Technique: Test each component separately.

Completion conditions: be sure each component drivers the expected outcome before going to integration Testing.

### 5.1.1 Common function

#### 5.1.1.1 log in

|                   |  |
|-------------------|--|
| Test ID           | Log in   |
| Prerequisite      | Have an account  |
| Test procedure    | <p>After clicking on the login icon, after completing all the required items, one options will appear</p> <ol style="list-style-type: none"> <li>1- Correct email and password.</li> <li>2- Correct email and incorrect password.</li> <li>3- Incorrect email and correct password.</li> <li>4- Incorrect email and incorrect password.</li> </ol> |
| Expected result   | <ol style="list-style-type: none"> <li>1- Enter the program successfully.</li> <li>2- An error message will appear “incorrect email or password”.</li> <li>3- An error message will appear “incorrect email or password”.</li> <li>4- An error message will appear “incorrect email or password”.</li> </ol>                                       |
| Verified (YES/NO) | Yes.   |

Table (3)

### 5.1.1.2 Forgot password

|                   |   |
|-------------------|---|
| Test ID           | Forgot password.  |
| Prerequisite      | Have an account.  |
| Test procedure    | <p>After you click on Forgot your password and go to the email message then:</p> <ol style="list-style-type: none"> <li>1- Enter the new password</li> <li>2- Enter the password again to confirm</li> </ol> <p>2 cases will appear:</p> <ol style="list-style-type: none"> <li>1- The new password matches the confirmed password.</li> <li>2- The new password doesn't match the confirmed password.</li> </ol> |
| Expected result   | <ol style="list-style-type: none"> <li>1- A message will seem "your password has been updated successfully".</li> <li>2- An error message will seem "your password doesn't match confirmed password".</li> </ol>  |
| Verified (YES/NO) | Yes.  |

Table (4)

### 5.1.1.3 create new account

|                   |  |
|-------------------|--|
| Test ID           | create new account   |
| Prerequisite      | -  |
| Test procedure    | <p>Click on create new account button:</p> <ol style="list-style-type: none"> <li>1- Fill all the field with the appropriate information.</li> <li>2- Field with inappropriate information               <ol style="list-style-type: none"> <li>a. Incorrect email.</li> <li>b. Incorrect phone number.</li> <li>c. Omunique username.</li> <li>d. Password doesn't match.</li> </ol> </li> <li>3- Empty fields.</li> </ol>                              |
| Expected result   | <ol style="list-style-type: none"> <li>1. An error message will appear enter the appropriate information</li> <li>2. An error message will appear:               <ol style="list-style-type: none"> <li>a) "Email already exist / Not valid"</li> <li>b) "Phone number already exist".</li> <li>c) "username already exist"</li> <li>d) "Password not matched"</li> </ol> </li> <li>3- An error message will appear "This field is required "</li> </ol> |
| Verified (YES/NO) | yes  |

Table (5)

### 5.1.1.4 edit profile

|                   |  |
|-------------------|--|
| Test ID           | edit profile   |
| Prerequisite      | Have an account.   |
| Test procedure    | Click on your account button:<br>1- press on the field that you want to bring it to date.<br>2- Enter your modify.<br>3- A message will display “are you sure?”.<br>I.Yes<br>II.No |
| Expected result   | If the user clicks “YES” a message will appear: “your update done successfully”.<br>If client click “NO” nothing will appear”.   |
| Verified (YES/NO) | Yes.   |

Table (6)

## 5.2 Integration Testing

The integration test is done afterward adding all components and making sure of component test victory [10]. Then guarantee that all components work and interact together easily and adequately by integration test. The integration test ensures that the complete system interacts effectively and is working as expected.

Technique: Testing the functionalities incrementally must work to ensure that any component included is genuine.

Completion criteria: Ensures that the complete method interacts effectively and is working as expected.

### 5.3 Conversion Testing

In software testing, each software data is a critical component because a software application accomplishes its operations with the help of data. Conversion testing is used to justify the conversion of one data format to an additional that could be used continuously by the software below test. Any type of data could be converted from one form to an extra, but web pages must be in HTML format for web browsers to render the page appropriately [9] . Data might be converted in an automated manner utilizing a tool or manually by extracting data from the source database and inserting the data into the destination database

Technique: Data validation test construct.

Completion criteria: Data Validation Testing ensures that the data is accurate and conclude ; that the data and database can effectively get through any needed transformations without loss . furthermore having all the expected data served suitably corresponding to all the inputs [8] .

### 5.4 Job Stream Testing

job stream testing a series of functioning that execute together in particular bid as said by several actions. Each job will have its possess qualities and dependencies [7]. The output of one job is input of the other job and so on [6]. for instance, whether the customer desires in order to replace the password press on replace passcode enter the newly created passcode and press yes. These actions will execute sequences depending on one another. job stream testing assists in order to detect every bug and ensure that each operate will execute effectively.

Technique: Test stream of the functions.

Completion criteria: Ensure each functioning execute effectively and drivers the expected outcome.



## 5.5 Interface Testing

The objective of user interface testing is to identify and treat flaws and guarantee that all interactions are performing adequately and that all faults in the application are addressed.

|                 |   |
|-----------------|---|
| Login           | <ol style="list-style-type: none"><li>1- Enter email and password.</li><li>2- In case the email and passcode are accurate then move to the timeline page.</li><li>3- Otherwise, if the email and password Invalid, an error message will appear to be processed</li></ol>   |
| Forget password | <ol style="list-style-type: none"><li>1- Enter the new password</li><li>2- Enter the password again to confirm</li><li>3- In case the email and password are correct then move to the timeline page.</li><li>4- Otherwise, if the email and password Invalid, an error message will appear to be processed.</li></ol> |
| Create account  | <ol style="list-style-type: none"><li>1- Fill all the fields.</li><li>2- If all the fields are filled, then the message will be shown then moved to the login user interface and continue.</li><li>3- OR, if some of the fields are unfilled then an error message will be shown.</li></ol>                           |

Table (7)

## 5.6 Security Testing

The objective of security testing is to safeguard that a scheme is secured and that entire the information is procured from unauthorized permission. additionally, must work to ensure that nobody can have access in order to the details of the other user. in order to meet the customer ' s expectations, the security in the My Uni Guide treat need to be at an elevated level. in this place are several examples of performance testing.:

- Confirm that the system is secure against unauthorized permission.
- Confirm that the entire payments are composed in a secure blueprint.
- Confirm that the passcode was changed utilizing an email link as opposed to the system itself.

Technique: nobody can gain access to the system without a genuine email address and password. therefore, entire after actions in the application are executed in a secure manner.

Criteria for completion: Only authorized users have permission in order to access, because of security testing.

## 5.7 Recovery Testing

Recovery Testing is a type of Non-Functional Testing in software engineering. Recovery testing is an application testing technique that validates an application's aptitude in order to recover from failures for example software/hardware crashes, network outages, and so on. The objective of Recovery Testing is in order to work out in-case application operations that could be renewed afterward a catastrophe instead integrity loss. Recovery testing involves returning applications in order to a known assert of integrity and reprocessing transactions in order to the failure point.

Technique: Backup and succeed the Recovery method Life Cycle. The life cycle of the recovery procedure could be categorized into the five steps as displayed in Figure []

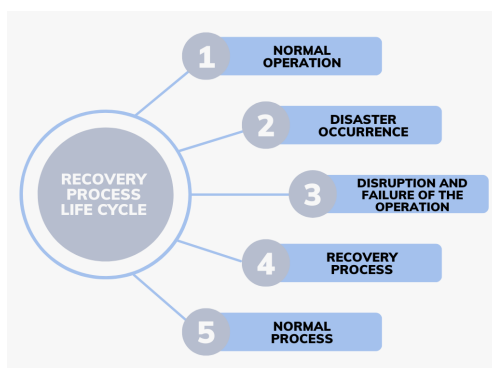


Figure (1)

1. Normal operation: A system comprised of hardware, software, and firmware put together in order to get a current goal. The system is titled in order to carry out the ordinary means in order to execute the constructed work without every disruption within a stipulated period.

2. Disaster occurrence:

A disruption could happen because of malfunction of the application, because of several objectives like input-initiated malfunction, application crashing because of hardware failure, damaged because of blaze, theft, and strike

3- Disruption and failure of the operation: Disruption phase is a more importantly painful phase which leads in order to trade losses, relation burst, opportunity losses, manhour losses and invariably financial and goodwill losses. any judicious agency should have a way in order to catastrophe recovery in order to allow the disruption phase in order to be minimal.

4- Recovery process (Disaster clearance): whether a backup method and risk mitigation processes are at the right place before confronting tragedy and disruption, then recovery might be done without much loss of time, exertion, and power. A named individual, besides his squad with the assigned part of each of these persons must be defined in order to mend the duty and aid the organization to help protect from lengthy disruption period.

5- Reconstruction - Normal process: Reconstruction of entire processes and details in order to carry the complete method in order to go in order to ordinary manner. Reconstruction might signify multiple sessions of approach to restore entire folders besides configuration files. There ought to be good papers and method of reconstruction in order to accurate recovery.

Completion conditions:

afterwards the restoration of folders and files, the after checks might be accomplished must work to ensure that files are correctly recovered:

- The corrupted document folder must be renamed.
- Comparing the number of the files in the restored folders in order to those in an available folder.
- Checking whether the files are available by opening them.
- Guarantee that the information could be browsed instead updated.
- Comparing files and directories.

## 5.8 Performance Testing

The overall performance test looks at need to make sure having the minimal response time which measures the pace of the platform. Also, guarantees the accessibility, portability, and scalability. For response time, it should be less as conceivable regarding load conditions, so customers and clients don't have to wait for lengthy time. Furthermore, the platform should be constantly on hand and accessed by the users. In addition to ensures that the platform runs in all working structures such as IOS, Android. Moreover, the application ought to be scalable due to the predicted increase in the future.

Some performance tests carried out are:

- Check the most range of transactions ought to be completed in a second.
- Check the most quantity of customers the platform should cope with earlier than crashes.
- Check if platform backup the database efficaciously each day.
- Check platform's velocity in uploading pictures.
- Check if the application works as anticipated in different operating systems.
- Check platform's velocity in extraordinary net connection.

Technique: Testing in specific conditions, various circumstances, and approaches to ensure that the response time, accessibility, portability, and scalability performed as expected.

Completion criteria:

- Satisfactory response time.
- Portable for all working structures (operating system) and devices.
- Available when it's accessed.
- Scalable for any wide variety of users.

## 5.9 Regression Testing

Regression test is a kind of tests that is carried out after a piece of software program has been modified. It entails jogging some check instances on the modified software to make sure that the software program will operate in accordance with the modified specification. Modifying an application entail writing good new judgment to right an error or enforce an amendment (change) and combine it into a present software. Modifications can be minor or major. Minor changes consist of adding, deleting, or rewriting a few traces of code. Major adjustments encompass adding, deleting, or changing one or greater modules or subsystems. Regression trying out is a necessary phase of the upkeep phase, at some stage in which the software program device may additionally be corrected, tailored to a new environment, or better to enhance its performance. Furthermore, regression checking out may also commence at some point of the improvement section after the blunders of the examined software program have been detected and corrected. An examined software program is a software program that has been fully examined the usage of a high- great test plan. Testing targets revealing hidden continual software program blunders in the ultimate levels of software program development, after the software program has been fairly examined. A well-developed check graph ought to be on hand at this point. When re-testing the application after it has been corrected for any errors, it is preferable to reuse the present check instances alternatively than re-designing all new check cases. Regression trying out verifies the correctness of the new logic, ensures the endured operation of the unmodified parts of a software, and validates that the modified software program works properly. Most humans have assumed that regression checking out consists of repeating all the checks in the check sketch and retesting all the program's facets. Regression checking out researchers emphasize retesting solely modified and new aspects of the application [11].

Technique: Based on the specification modification, two kinds of regression tests can be recognized and used. These are:

- 1- Progressive regression testing: Progressive regression trying out makes use of the modified specification. When new aspects necessities are brought to a software, the specification will be modified to replicate these additions. In most cases, new modules will be brought to the software system, which potential that the regression checking out manner will contain trying out modified software program in opposition to a modified specification.
- 2- Corrective regression testing: In corrective regression testing, the specification stays the same. Only some software program directions and maybe some sketch selections are modified. This has essential implications since most of the test cases at instances in the preceding check diagram are probable to be legitimate in the feel that they efficaciously specify the input-output relationship. However, due to conceivable changes to the software's management and facts go with the flow structures, some presents test cases at instances are no longer trying out the until now focused software constructs. The corrective regression checking out is often carried out after some corrective motion is carried out on the software.

The differences between progressive and corrective regression testing are [12]:

| Corrective regression testing   | Progressive regression testing   |
|---|--|
| Usually carried out throughout development and corrective maintenance.    | Usually performed for the duration of adaptive and perfective maintenance. |
| Specification is no longer changed.                                       | Detail is changed.   |
| Many test cases can be reused.  | Fewer test cases can be reused.  |
| Includes minor amendment to code (e.g., including or erasing statements). | Includes most important amendment (e.g., adding or deleting modules).      |
| Invoked at irregular intervals.   | Invoked at ordinary intervals.   |

Table (8)

Completion criteria: To make sure that utilized adjustments to the software have no longer adversely affected before examined functionality.

## 5.10 Acceptance Testing

Acceptance testing is one of the last stages of software testing, and it verifies whether the system meets the stakeholder's needs before it is handed to the client. Furthermore, getting feedback is preferable in terms of both time and cost and address any flaws with the software's usability before releasing it.

Technique: Obtain software feedback to ensure that the software worked properly. Completion criteria: The application will be released if it is error-free.

## 5.11 Beta Testing

Beta testing is releasing the platform to specific people and take feedback about the system from all aspects. My Uni Guide works with a company that has specialist people in testing the whole system. After taking the feedback, My Uni Guide developers should consider any change, error, or failure that might occur and received from the specialist then revise and modify it to get correct and smooth system. Technique: Test the system by specialist users. Then, the developers receive a feedback and revise the system. Completion criteria: Test the whole system and ensures it works as expected.

## 6. PASS / FAIL CRITERIA

This section contains suspension criteria, resumption criteria and approval criteria.

### 6.1 Suspension Criteria

The test results will be accepted if the following criteria are met [1]:

- Reequipments are not available.
- Large volumes of bugs.
- System glitch.

### 6.2 Resumption Criteria

Testing may be resumed if the following requirements are met [3]:

- Reequipments is available again.
- Large volumes of bugs.
- System glitch has been fixed

### 6.3 Approval Criteria

The test results will be accepted if the following criteria are met [2]:

- Minimized risk.
- Data Monitored for safety.
- Produces the anticipated outcome.
- Confidentiality/privacy Maintained.
- There will be no impact on the hardware and software.

## 7. TESTING PROCESS

This part will decide the test technique and standards that are used in the application performing test exercises and comprise subsection of incorporate every of test expectations, checking out tasks, responsibility, assets, and schedule.

### 7.1 Test Deliverables

The Software Test Plan (STP) is the record that will be produced as an end result of the trying out procedure for My Uni Guide project. The project undertaking will be prepared to supply after finishing the test process.

## 7.2 Testing Tasks

The test phase is the most necessary phase of any software program project. Inaccurate challenge planning can provide a lot of harm on the test execution and on the nature of the application. So, the mission must be divided cautiously and wisely. Testing duties things to do ought to be include:

- Set up the SRS document.
- Set up e the SDS document.
- Manage STP document.
- Set up the hardware test climate.
- Set up the software test climate.
- Apply all the test exercises utilizing different techniques.
- Managing any bugs and mistakes that happened during testing.
- Save the work in case of any exchange or update.
- Distinguish bugs and errors, depict, and send for amendment.
- Check if the enhancements are executed.
- Keep testing the item till get the predicted result.
- Test the product if meets the necessities.

## 7.3 Responsibilities

All group contributors are accountable for trying out the application following the constraints attributes of every part and have interaction all testing tasks. Which consist of preparing, manipulating, and designing the platform and file additionally, managing any bugs that show up during the testing stage.



## 7.4 Resources

To finish off the system testing phase, the group individuals will use these resources:

| Resource  | Description  |
|-----------|--|
| Hardware  | A PC that has get entry to fast internet connection to join the net server.  |
| Software  | <ul style="list-style-type: none"> <li>○ NetBeans</li> <li>○ MySQL</li> </ul>  |
| Network   | Networks encompass LAN and net connection to simulate the user environment.  |
| Server    | The web-based test includes: <ul style="list-style-type: none"> <li>○ Client-server</li> <li>○ A separate web server</li> <li>○ A database server</li> </ul> |
| Human     | All the team members rely upon their insight and abilities.  |
| Test tool | Develop a test tool which can auto generate the test result to the pre-defined form and automated test execution.  |

Table (9)

## 7.5 Schedule

The schedule of each testing task and estimated date for the tasks:

| Task                               | Date         |
|------------------------------------|--------------|
| Create test specification          | Oct 16, 2022 |
| Perform test execution             | Oct 18, 2022 |
| Error logs and execution logs      | Oct 20, 2022 |
| Test Results/reports               | Oct 23, 2022 |
| Modify the system                  | Oct 24, 2022 |
| Modify Software testing plan (STP) | Oct 28, 2022 |
| Test delivery                      | Oct 30, 2022 |

Table (10)

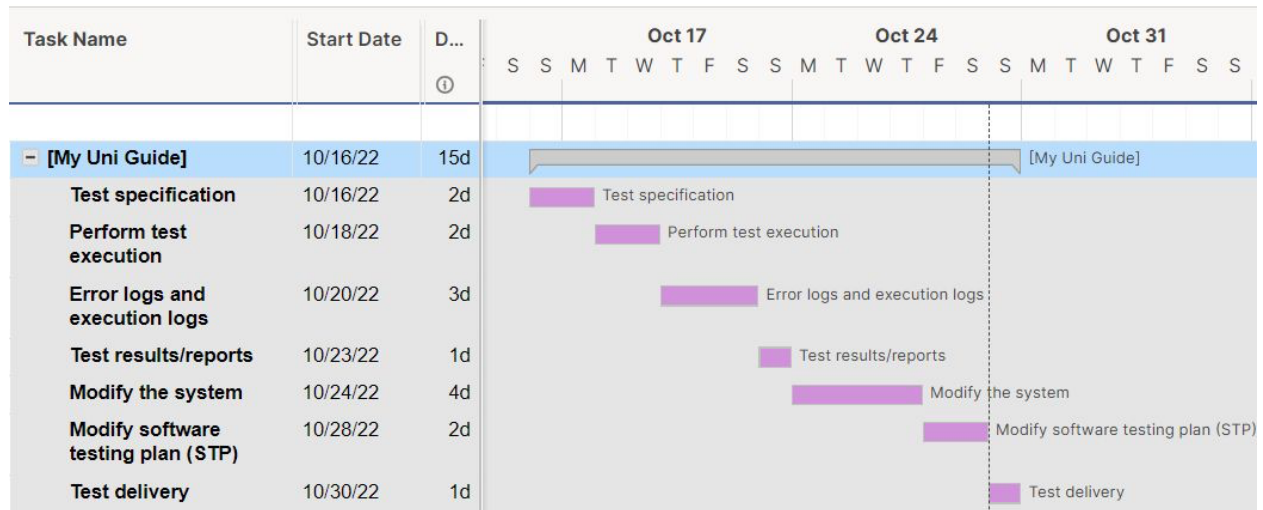


Figure (2)

## 8. ENVIRONMENTAL REQUIREMENTS

This section contains the hardware, software, security, tools, publications, risks and assumptions related to the environment.

### 8.1 Hardware

In order to test the My Uni Guide website, the following hardware are required:

- High-speed internet connection.
- Super-computers.
- Personal computers.

### 8.2 Software

The following software is required to carry out the testing My Uni Guide application activities tools:

- NetBeans 8.2
- MySQL Workbench
- NetBeans
- GitHub
- PHP
- python
- CSS

## 8.3 Security

To maintain system security, it is crucial to develop the system using reliable resources. Also, each user. Also, each user must enter a valid email address and password to access the system. Cannot access the system unless the email and password are correct. Also, if the user forgets his/her password, he/she can only recover his/her password through an email link.

## 8.4 Tools

My Uni Guide application utilizes strategies tools in order to test the application and check the validation and verification of the application. The after tools is needed in order to execute the testing of My Uni drive application activities:

- XAMPP
- Usability testing
- HERA
- TestRail
- Performance testing

## 8.5 Publications

The following documents are required to support the software test plan (STP):

- Software Requirement Specification (SRS)
- Software Design Specification (SDS)

## 8.6 Risks and Assumptions

| ASSUMPTIONS   | CONSTRAINTS  | RISKS  |
|---|--|--|
| THE APPLICATION DEVELOPED EFFICIENTLY   | Hiring highly qualified programmers                                      | Programmers do not include all technologies      |
| THE APPLICATION SHOULD BE CONVENIENT FOR THE STUDENTS TO INTERACT WITH (CONVENIENT INTERACTION) | Application free of complexity to provide a user-friendly application    | The inability of the program to be up-to-date.   |
| TO BE DELIVERED ON TIME   | Assign tasks to staff, each in his field                                 | Running out of time.                             |
| SUFFICIENT RESOURCES AND MANPOWER TO COMPLETE DEVELOPING THE APP                                | Determining and classifying the staff before starting the implementation | Lack of manpower due to their circumstances.     |
| HAVING AN ADEQUATE BUDGET   | Having an estimated budget is inadequate.                                | Facing difficulties evolution of the application |

Table (11)

## 9. CHANGE MANAGEMENT PROCEDURES

Any modification or change should implement in the platform must be approved by the whole team members of My Uni Guide. There are stages steps of procedures to get approval. First, define the issues that can be changed and improved. Second, discuss the problem and solutions with test manager. Lastly, do a meeting with all project members, the supervisor, and stakeholders to propose the changes, discuss and get suggestion for other changes. If all participants agree to the suggested adjustment, the plan will be updated to amend accordingly. Keep in mind, any change must be documented.

However, if there's any suggestion or recommendations from the students based on the requirement. The team members will take it in consideration to be implemented if it's helpful for the platform [4].

## 10. PLAN APPROVALS






| Name                      | Signature   | Date             |
|---------------------------|---|------------------|
| Dr. Norah M. Alnaim       |   | October 30, 2022 |
| Fatima Ali Alrastem       |  | October 30, 2022 |
| Jumana Yousef Aljassim    |  | October 30, 2022 |
| Bushra Mohammed Alshehri  |  | October 30, 2022 |
| Albandari Saleh Alsanhani |  | October 30, 2022 |
| Dana Rami Kurdi           |  | October 30, 2022 |

Table (12)