

جامعة الإمام عبد الرحمن بن فيصل  
IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY



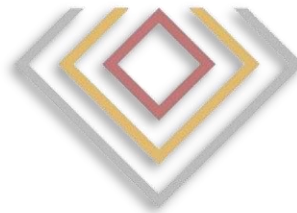
Imam Abdulrahman Bin Faisal University  
College of Computer Science & Information Technology

Department of Computer Science  
**CS 411 – Software Engineering**

**Term 1 – 2019/2020**

## Software Test Plan

**For**



جواهر  
**JAWAHER**

**L7F2 – Team 2**

**Version 1.0**  
**Mrs. Lubna Tahlawi**

*December 8, 2019*

This Software Test Plan (STP) was prepared and provided as a deliverable for Software Engineering, CS 411, Term 1. It will be used by all JAWAHER employees and customers in JAWAHER Alnemer Jewels Company, Eastern Province, Saudi Arabia.

This document is based in part on the IEEE Recommended Practice for SRS Descriptions.

### **Team Members:**

#	Name	ID	Role
1	Zahra Maher Al-Nemer	2160001732	Leader
2	Reem Fadhel Aljishi	2170000468	Member
3	Zahra Majed Al-Zawad	2170006162	Member
4	Fatimah Abbas Alramadhan	2170005648	Member
5	Fatimah Yousef Alomran	2160004787	Member

## Table of Contents

<b>1. Introduction .....</b>	<b>7</b>
<b>1.1 Objectives .....</b>	<b>7</b>
<b>1.2 Testing strategy .....</b>	<b>7</b>
<b>1.3 Scope.....</b>	<b>7</b>
<b>1.4 Definitions and Acronyms .....</b>	<b>7</b>
<b>1.5 References .....</b>	<b>8</b>
<b>2. Test Items .....</b>	<b>9</b>
<b>2.1 Program Modules .....</b>	<b>9</b>
<b>2.2 Job Control Procedures .....</b>	<b>9</b>
<b>2.3 User Procedure .....</b>	<b>9</b>
<b>3. Features to Be Tested .....</b>	<b>10</b>
<b>4. Features not to be tested .....</b>	<b>10</b>
<b>5. Approach .....</b>	<b>10</b>
<b>5.1 Component Testing .....</b>	<b>10</b>
5.1.1 Test Cases .....	11
<b>5.2 Integration Testing.....</b>	<b>30</b>
5.2.1 Admin Homepage.....	30
5.2.2 Customer Homepage .....	31
<b>5.3 Data and Database Integrity Testing.....</b>	<b>31</b>
<b>5.4 Security Testing.....</b>	<b>32</b>
<b>5.5 Acceptance Testing.....</b>	<b>32</b>
<b>5.6 Performance Testing.....</b>	<b>32</b>
<b>5.7 Beta Testing .....</b>	<b>33</b>
<b>5.8 Regression testing.....</b>	<b>33</b>
<b>5.9 Recover testing.....</b>	<b>33</b>
<b>5.10 Interface Testing.....</b>	<b>34</b>
5.10.1 Mail Server.....	34
<b>6. Pass/Fail Criteria .....</b>	<b>34</b>

6.1	Suspension Criteria .....	34
6.2	Resumption Criteria .....	34
6.3	Approval Criteria .....	34
7.	Testing Process .....	35
7.1	Test Deliverables .....	35
7.2	Testing tasks .....	35
7.3	Responsibilities .....	35
7.4	Resources .....	35
7.5	Schedule .....	36
8.	Environmental Requirements .....	36
8.1	Hardware .....	36
8.2	Software .....	36
8.3	Tools .....	36
8.4	Publications .....	36
8.5	Risks and Assumptions .....	36
9.	Change Management .....	37
10.	Plan Approvals .....	37

## Table of Tables

Table 1 List of Definitions .....	8
Table 2 List of Acronyms .....	8
Table 3 "Signup" test case .....	12
Table 4 "Login" test case .....	12
Table 5 "Forget Password" test case .....	13
Table 6 "Add to cart" test case .....	13
Table 7 "Product Quality" test case .....	14
Table 8 "Remove a product" test case .....	14
Table 9 "Checkout" test case .....	15
Table 10 "Track Order" test case .....	15
Table 11 "Add collection" test case .....	16
Table 12 "Modify Collection" test case .....	19
Table 13 "Delete Collection" test case .....	20
Table 14 "Add a product" test case .....	23
Table 15 "Duplicate a product" test case .....	26
Table 16 "Delete a product" test case .....	26
Table 17 "filter by status" test case .....	27
Table 18 "Change order status" test case .....	28
Table 19 "View, block, and delete member" test case .....	28
Table 20 "Unblock member" test case .....	29
Table 21 "Adding new admin" test case .....	30
Table 22 "Admin homepage" test case .....	31
Table 23 "Customer homepage" test case .....	31
Table 24 Project resources .....	35

Table 25 Project schedule .....	36
Table 26 Plan Approvals.....	37

## 1. Introduction

This section introduces the Software Test Plan (STP) for Jawaher Alnemer Jewels company. It specifies the objectives of this document, testing strategies used and the scope of the document. It also defines the definitions, acronyms and references related to Jawaher Alnemer Jewels.

### 1.1 Objectives

This section's purpose is to define the scope, the resources, and the schedule for testing activities. In addition it describes the functions we will be testing, defines which tasks should be completed and which member is responsible for each task, all according to the requirements specified in the Software Requirements Specifications (SRS). There tests are to ensure that the software is up and running as intended.

### 1.2 Testing strategy

The test strategies are shown throughout this document. Also, it will show information about the test items, the different features they use, and how to implement them. Moreover, it encompasses a brief description of the implementation process of the testing plan.

The Details of all the functions we are testing were already clarified in the previous documents, SRS and SDS.

### 1.3 Scope

The STP document is a comprehensive and complete test plan for Jawaher Alnemer Jewels. All the functions incorporated in the software will be tested by applying component and integration testing. Validation and verification mechanisms will also be used.

### 1.4 Definitions and Acronyms

Definitions used in this documents are shown in the table below

Definitions	Meaning
<b>Software Test Plan (SRS)</b>	A document that describes the behavior and features of a software system. It aims to identify functions that satisfy the user's needs. (1)
<b>Software Design Specification (SDS)</b>	Software Design Specification is a document that defines all data, architectural, interface and component-level design of the software. (2)

<b>WIX.com</b>	An online SDK used to build websites in drag and drop technique with the HTML5 language.
<b>SKU</b>	“Stock Keeping Unit” is a unique code you can create for each product or variant we have in the store. Using SKUs helps with tracking inventory.

*Table 1 List of Definitions*

Acronyms used in this documents are shown in the table below.

Acronyms	Detention
<b>SDS</b>	Software Design Specification.
<b>SRS</b>	Software Requirement Specification.
<b>SDK</b>	Software Development Kit.
<b>HTML5</b>	Hyper Text Markup Language version 5.
<b>IEEE</b>	Institute of Electrical and Electronics Engineers
<b>SAR</b>	Saudi Arabian Riyal

*Table 2 List of Acronyms*

### 1.5 References

- 1- What is the Software Requirement Specification [online] Available at:  
<https://www.inflectra.com/ideas/topic/requirements-definition.aspx> [Accessed 20 Mar.2019].
- 2- Lucidchart, "What is a Data Flow Diagram?," [Online]. Available:  
<https://www.lucidchart.com/pages/data-flow-diagram>. [Accessed 20 November 2019].



## 2. Test Items

Our software will be entirely tested from A to Z, all functions and requirements will be assured that they meet what the customer's desired and as written in the SDS document.

### 2.1 Program Modules

All tests implemented in this document are included in section 5 of this document.

### 2.2 Job Control Procedures

The tests will be implemented into 3 stages. First stage is component testing which aims to confirm the validity of the testing procedure, and makes sure that all components work as they should.

After finishing the first stage, comes the second stage which is integration testing. This stage, unlike component testing, tests how components work with each other. Also, it takes the main pages and retests each component through them to make sure that the interaction between components is correct.

At the end, there are a few more tests to implement, such as security test and performance test. But the most important work is in the first two stages, which aim to test the components of the software.

### 2.3 User Procedure

You will find all user tests implemented included in section 5 of this document.

### 3. Features to Be Tested

Jawaher Alnemer Jewels testing covers the features that we mentioned in the Software Requirements Specification (SRS) document. Also, system function that specified in the Software Design Specification (SDS) document.

### 4. Features not to be tested

All requirements are in the SRS will be tested except the following features:

- Home page
- Logout function
- Shop product page
- Location page
- My account page
- Thank you page
- Add note to an order
- Order requirements
- Inbox requirements

### 5. Approach

This section defines all required tests to be applied to JAWAHER jewelry website online store, which contains:

- Component Testing.
- Integration Testing.
- Data and Database Integrity Testing.
- Security Testing.
- Acceptance testing.
- Performance Testing.
- Beta Testing.

#### 5.1 Component Testing

This subsection explains the component testing, which tests each component in each interface in the system that is listed in 8.1 subsections of Software Design Specification (SDS). Each component must be work as expected. Also, component testing has a huge effect to discover the system bugs and defects.

- **Technique:** All components must be transient in an independent test procedure before moving on to the integration testing phase. Valid data restrictions are to verify the functions declared listed in 8.1 subsections of Software Design Specification (SDS), and the following results must be verified:
  1. When valid data is used, the expected result must occur.
  2. When invalid data is used, error messages are displayed.
  3. The rules and restrictions must be applied properly.
- **Completion Criteria:** all components are working as expected without any errors.
- **Special Consideration:** Test individual components one by one depending on the classification of function based on user type, starting from the common functions, then customer functions, ending to the admin functions.

### 5.1.1 Test Cases

#### 5.1.1.1 Common Functions

##### 5.1.1.1.1 Signup

Testing case of sign-up function for all users are showing in the Table below

Test ID	SignUp_01
Prerequisite	None
Test Procedure	<ol style="list-style-type: none"> <li>1. Tap on Sign Up with email               <ol style="list-style-type: none"> <li>a. Enter valid email and valid password</li> <li>b. Entering incorrect email</li> <li>c. Entering exists email in the WIX DB</li> <li>d. Leave email empty</li> <li>e. Enter incorrect password for example Enter password consist of less than 4 characters</li> <li>f. Leave password empty</li> </ol> </li> <li>2. Tap on Sign Up with Facebook</li> <li>3. Tap on Sign Up with Google</li> </ol>
Exponent Result	<ol style="list-style-type: none"> <li>1. Redirected to "Signup" webpage               <ol style="list-style-type: none"> <li>a. Redirected to "View Profile" webpage</li> <li>b. Error message will appear "double check your email and try again"</li> <li>c. Error message will appear "an account with this email already exists"</li> <li>d. Error message will appear "Email cannot be blank"</li> <li>e. Error message will appear "password length must be between 4 to 100 character"</li> <li>f. Error message will appear "Make sure you enter a password"</li> </ol> </li> <li>2. Redirected to "View Profile" webpage</li> <li>3. Redirected to "View Profile" webpage</li> </ol>

<b>Actual Result</b>	Result is an expected
<b>Verified (Yeas/No)</b>	Yes

*Table 3 "Signup" test case*

#### 5.1.1.1.2 Login

Testing case of Login function for all users are showing in the Table below

<b>Test ID</b>	<b>LogIn_01</b>
<b>Prerequisite</b>	User has an account
<b>Test Procedure</b>	<ol style="list-style-type: none"> <li>1. Tap on Log In with Email <ol style="list-style-type: none"> <li>a. Enter valid email address and password</li> <li>b. Enter Not exist or incorrect email</li> <li>c. Login without entering the email</li> <li>d. Enter incorrect password</li> <li>e. Enter password with less than 4 characters</li> <li>f. Login without entering the password</li> </ol> </li> <li>2. Tap on Log In with Facebook</li> <li>3. Tap on Log In with Google</li> </ol>
<b>Exponent Result</b>	<ol style="list-style-type: none"> <li>1. Redirect to Facebook "Log In " webpage <ol style="list-style-type: none"> <li>a. Login successful</li> <li>b. Error message will appear "double check your email and try again"</li> <li>c. Error message will appear "double check your email and try again"</li> <li>d. Error message will appear "Email cannot be blank"</li> <li>e. Error message will appear "wrong email or password"</li> <li>f. Error message will appear "password length must be between 4 to 100 character"</li> <li>g. Error message will appear "make sure you enter a password"</li> </ol> </li> <li>2. Redirect to Facebook "Log In" webpage</li> <li>3. Redirect to Google "Log In" webpage</li> </ol>
<b>Actual Result</b>	Result is as expected
<b>Verified (Yeas/No)</b>	Yes

*Table 4 "Login" test case*

#### 5.1.1.1.3 Forget Password

Testing case of Forget password function for all users are showing in the Table below

Test ID	ForgetPassword_01
Prerequisite	User has an account
Test Procedure	<ol style="list-style-type: none"><li>1. Enter correct exist email</li><li>2. Enter incorrect</li><li>3. Enter email not in WIX DB</li></ol>
Exponent Result	<ol style="list-style-type: none"><li>1. Email message will be sent to customer with a link to reset a password</li><li>2. Error message will appear "double check your email and try again"</li><li>3. Error message will appear "This email doesn't match any account. Try again"</li></ol>
Actual Result	Result is as expected
Verified (Yeas/No)	Yes

*Table 5 "Forget Password" test case*

#### 5.1.1.2 Customer Functions

##### 5.1.1.2.1 Add to Cart

The following table shows the test case for the “Add to the cart” function:

Test ID	AddToCart_001
Prerequisite	Customer is logged into the system
Test procedure	Click on button ”add to cart” under the product
Expected result	Product added to the user cart
Actual result	Result is same as expected
Verified (Yes/No)	Yes

*Table 6 "Add to cart" test case*

#### 5.1.1.2.2 Product Quality

The following table shows the test cases for the “Product quantity” function:

Test ID	ProductQuantity_001
Prerequisite	Customer is logged into the system
Test procedure	Select the quantity
Expected result	The quantity is as what the user chooses
Actual result	Result is same as expected
Verified (Yes/No)	Yes

*Table 7 "Product Quality" test case*

#### 5.1.1.2.3 Remove a product

The following table shows the test case for the “Remove a product ” function:

Test ID	RemoveProduct_001
Prerequisite	Customer is logged into the system
Test procedure	Click on “X” above the product in the cart
Expected result	The product is removed
Actual result	Result is same as expected
Verified (Yes/No)	Yes

*Table 8 "Remove a product" test case*

#### 5.1.1.2.4 Checkout

The following table shows the test case for the “Checkout” function:

Test ID	Checkout_001
Prerequisite	Customer is logged into the system
Test procedure	1- Fill the shipping details 2- Select the delivery method 3- Select the payment method
Expected result	See the review & place order
Actual result	Result is same as expected

Verified (Yes/No)	Yes
-------------------	-----

*Table 9 "Checkout" test case*

#### 5.1.1.2.5 Track Order

The following table shows the test case for the “Track order” function:

Test ID	TrackOrder_001
Prerequisite	Customer is logged into the system
Test procedure	Go to my orders to see all the information of the order
Expected result	The order is as what the customer ordered
Actual result	Result is same as expected
Verified (Yes/No)	Yes

*Table 10 "Track Order" test case*

#### 5.1.1.3 Admin Functions

##### 5.1.1.3.1 Add collection

The following table shows the test cases for the “Add Collection” function are shown on the table bellows:

Test ID	<b>AddCollection_001</b>
Prerequisite	The admin has already logged in.
Test Procedure	<ol style="list-style-type: none"> <li>1. Click on “New Collection” Button on the Collections Interface.</li> <li>2. When the Add Collection interface displayed, do the following: <ol style="list-style-type: none"> <li>a. Enter collection name.</li> <li>b. Miss the collection name.</li> </ol> </li> <li>3. Missing Adding Products to collection</li> <li>4. Add Product Collection: <ol style="list-style-type: none"> <li>a. Find the product by its name, then check on its check box and clock on add button.</li> <li>b. Select the products by checking on the check boxes.</li> </ol> </li> <li>5. Click on create a coupon before save the collection</li> <li>6. Click on Add Collection to site: <ol style="list-style-type: none"> <li>a. Choosing not to save the collection</li> <li>b. Chose to Save the collection</li> </ol> </li> </ol>

	<ol style="list-style-type: none"> <li>7. Delete a product by clicking on “x” button of the product.</li> <li>8. Click on “Save” Button.</li> <li>9. Click on “Cancel” Button.</li> </ol>
<b>Expected Result</b>	<ol style="list-style-type: none"> <li>1. Will take the user to add collection interface.</li> <li>2. When the Add Collection interface displayed, and done the mentioned actions: <ol style="list-style-type: none"> <li>a. Change the collection name to the name entered by the admin.</li> <li>b. Change the collection name as “Collection#”.</li> </ol> </li> <li>3. Nothing will be affected; the collection will be empty.</li> <li>4. Add Product Collection will: <ol style="list-style-type: none"> <li>a. 1) if the product not exist, then it will be added to the collection. 2) if the product is the only product exist in the collection, then a confirmation dialog will be displayed to confirm deletion of the product and empty the collection, and the admin confirms or not. 3) if it is existing with another product(s), then it will be removed from the collection.</li> <li>b. Add the selected products to the collection.</li> </ol> </li> <li>5. A message dialog displayed with a message says: Before you promote this collection, save the changes you made.</li> <li>6. Add Collection to site: <ol style="list-style-type: none"> <li>a. The products will not be added to the site.</li> <li>b. The collection will be saved and will give a choice to go to the editor and add it to a specific page. Once the editor is displayed will give a choice also to select which page to add the collection to, or to create a new page just for this collection, and the chosen choice will be done as selected.</li> </ol> </li> <li>7. Delete a product by clicking on “x” button of the product: <ol style="list-style-type: none"> <li>a. if the product is the only product exist in the collection, then a confirmation dialog will be displayed to confirm deletion of the product and empty the collection, and the admin confirms or not.</li> <li>b. if it is existing with another product(s), then it will be removed from the collection.</li> </ol> </li> <li>8. Save the collection and move to the Collections Interface.</li> <li>9. Cancel saving the collection move to the Collections Interface.</li> </ol>
<b>Actual Result</b>	The result is the same as expected.
<b>Verified(Yes/No)</b>	Yes.

*Table 11 "Add collection" test case*



#### 5.1.1.3.2 Modify Collection

The following table shows the test cases for the “Modify Collection” function are shown on the table bellows:

<b>Test ID</b>	<b>ModifyCollection_001</b>
<b>Prerequisite</b>	The admin has already logged in.
<b>Test Procedure</b>	<ol style="list-style-type: none"><li>1. Click on “...” Button and click on “Edit” selection.</li><li>2. When the Edit Collection interface displayed, do the following:<ol style="list-style-type: none"><li>a. change collection name.</li><li>b. Miss the collection name.</li></ol></li><li>3. Missing Adding Products to collection if it is empty.</li><li>4. Add Product Collection:<ol style="list-style-type: none"><li>a. Find the product by its name, then check on its check box and clock on add button.</li><li>b. Select the products by checking on the check boxes.</li></ol></li><li>5. Click on create a coupon with all:<ol style="list-style-type: none"><li>a. Selection the type of coupon.</li><li>b. Missing type of coupon.</li><li>c. Entering code of the coupon.</li><li>d. Missing the code of the coupon.</li><li>e. Entering coupon name.</li><li>f. Missing the coupon name.</li><li>g. Selection of applied products.</li><li>h. Miss-selection to applied products</li><li>i. Entering the discount of coupon</li><li>j. Missing the discount of the coupon.</li><li>k. Change the limitation of the coupon.</li><li>l. Entering the start validation date</li><li>m. Entering the end validation date.</li><li>n. Missing the start validation date</li><li>o. Missing the end validation date</li><li>p. Chick the not set end date check box.</li><li>q. Entering the limit number of use.</li><li>r. Checking on Unlimited check box.</li></ol></li><li>6. Click on Add Collection to site.</li><li>7. Delete a product by clicking on “x” button of the product.</li><li>8. Click on “Save” Button.</li><li>9. Click on “Cancel” Button.</li></ol>

## Expected Result

1. Will take the user to Edit Collection interface.
2. When the Edit Collection interface displayed, and done the mentioned actions:
  - c. Change the collection name to the new name entered by the admin.
  - a. Change the collection name as “Collection#”.
3. Nothing will be affected; the collection will remain empty.
4. Add Product Collection will:
  - a. 1) if the product not exist, then it will be added to the collection.  
2) if the product is the only product exist in the collection, then a confirmation dialog will be displayed to confirm deletion of the product and empty the collection, and the admin confirms or not.  
3) if it is existing with another product(s), then it will be removed from the collection.
  - b. Add the selected products to the collection.
5. Click on create a coupon with all:
  - a. The type of coupon will be the selected choice.
  - b. It will select the first type of coupons by default.
  - c. Entering the code of coupon cause:
    - 1) coupon code change as the admin type.
    - 2) coupon name change automatically and be same as the coupon code.
  - d. A red highlighted field will display with an icon with a tip says” Create coupon code”.
  - e. The name will be changed from the automated name to the new name.
  - f. A red highlighted field will display with an icon with a tip say “Choose a name”.
  - g. The coupon will be applied to the selected products.
  - h. It will be applied automatically to a specific collection must be selected by the admin, and it is automatically if not selected will be the current collection.
  - i. The discount amount will be changed per the type of the coupon.
  - j. A red highlighted field will display with an icon with a tip says” Enter a valid amount”.
  - k. The limitation will be changed to the limit option selected by the admin.
  - l. The start validation date will be changed to the selected one.
  - m. 1) The end validation date will be changed to the selected one  
2) uncheck the end date check box.

	<ul style="list-style-type: none"> <li>n. The start validation date will be set automatically as the date of creating the coupon</li> <li>o. The end validation date will be set automatically as 2 dates after the start validation date.</li> <li>p. The end validation date will be free, and no validation date (it will be applied all the times).</li> <li>q. The number of times to use this coupon will be changed as the admin entered</li> <li>r. The coupon will be non-limited use of times</li> </ul> <p>6. will give a choice to go to the editor and add it to a specific page. Once the editor is displayed will give a choice also to select which page to add the collection to, or to create a new page just for this collection, and the chosen choice will be done as selected.</p> <p>7. Delete a product by clicking on “x” button of the product:</p> <ul style="list-style-type: none"> <li>a. if the product is the only product exist in the collection, then a confirmation dialog will be displayed to confirm deletion of the product and empty the collection, and the admin confirms or not.</li> <li>b. if it is existing with another product(s), then it will be removed from the collection.</li> </ul> <p>8. Save the collection and move to the Collections Interface.</p> <p>9. Cancel saving the collection move to the Collections Interface.</p>
<b>Actual Result</b>	The result is the same as expected.
<b>Verified(Yes/No)</b>	Yes.

*Table 12 "Modify Collection" test case*

#### 5.1.1.3.3 Delete Collection

The following table shows the test cases for the “Delete Collection” function are shown on the table bellows:

<b>Test ID</b>	<b>DeleteCollection_001</b>
<b>Prerequisite</b>	The admin has already logged in.
<b>Test Procedure</b>	<ul style="list-style-type: none"> <li>1. Click on “...” Button and click on “Delete” selection.</li> <li>2. Click on “delete” button.</li> <li>3. Click on “Cancel” button.</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>1. A confirmation dialog will be displayed with a confirmation message says: “Are you sure you want to delete this collection? Deleting a collection won't delete the products in it.”.</li> </ul>

	<ol style="list-style-type: none"> <li>2. Will cause a collection deletion.</li> <li>3. Will not delete the collection.</li> </ol>
<b>Actual Result</b>	The result is the same as expected.
<b>Verified(Yes/No)</b>	Yes

*Table 13 "Delete Collection" test case*

#### 5.1.1.3.4 Add a product

The following table shows the test cases for the “Add a Product” function are shown on the table bellows:

<b>Test ID</b>	<b>AddProduct_001</b>
<b>Prerequisite</b>	The admin has already logged in.
<b>Test Procedure</b>	<ol style="list-style-type: none"> <li>1. Click on “New Product” Button on the Products Interface.</li> <li>2. The Add Product interface will be displayed and admin performs: <ol style="list-style-type: none"> <li>a. Entering the product name.</li> <li>b. Missing the product name.</li> <li>c. Entering Ribbon.</li> <li>d. Missing Ribbon.</li> <li>e. Entering Price.</li> <li>f. Missing Price.</li> <li>g. Entering Description.</li> <li>h. Missing Description.</li> </ol> </li> <li>3. Apply on sale: <ol style="list-style-type: none"> <li>a. Entering discount amount by percent (%) or SAR.</li> <li>b. Missing the discount amount.</li> <li>c. Entering sale price.</li> <li>d. Missing sale price.</li> </ol> </li> <li>4. Adding Additional Info: <ol style="list-style-type: none"> <li>a. Entering data title.</li> <li>b. Missing data title.</li> <li>c. Entering a description.</li> <li>d. Missing a description.</li> </ol> </li> <li>5. Add Product Options: <ol style="list-style-type: none"> <li>a. Entering option title.</li> <li>b. Entering option choices.</li> <li>c. Missing option title or choices.</li> <li>d. Selection of option showing method.</li> <li>e. Miss-Selection of option showing method.</li> </ol> </li> </ol>

	<ul style="list-style-type: none"> <li>f. Click on add</li> <li>g. Click on cancel</li> </ul> <ol style="list-style-type: none"> <li>6. Add Inventory &amp; Shipping Details: <ul style="list-style-type: none"> <li>a. Select the product status (in stuck, out of stuck).</li> <li>b. Miss-select the product status.</li> <li>c. Enter an SKU.</li> <li>d. Miss an SKU.</li> <li>e. Entering weight.</li> <li>f. Missing of weight.</li> <li>g. Not apply inventory slide bar</li> <li>h. Apply track inventory slide-bar</li> </ul> </li> <li>7. Select the collection(s) to be added in.</li> <li>8. Click on create a coupon before save the collection.</li> <li>9. Click on “Save” button.</li> <li>10. Click on Cancel button.</li> </ol>
<b>Expected Result</b>	<ol style="list-style-type: none"> <li>1. Add a product interface will be displayed.</li> <li>2. Applying the previous mentioned actions on add product interface will cause: <ul style="list-style-type: none"> <li>a. The product name will be changed as entered.</li> <li>b. A red highlighted field will display with an icon with a tip says” Your product needs a name”.</li> <li>c. The ribbon will be displayed on the product picture on Jewelry type page.</li> <li>d. Nothing will be affected.</li> <li>e. The price will change as entered.</li> <li>f. A red highlighted field will display with an icon with a tip says” Price is invalid”.</li> <li>g. The description will be added to the product.</li> <li>h. Nothing will be affected.</li> </ul> </li> <li>3. Apply on sale will cause: <ul style="list-style-type: none"> <li>a. 1) if discount amount by percent (%), then an amount of entered percent will be discounted from the original price, and reflected sale price to this percent amount will be calculated and displayed on the sale price text field. 2) if the discount amount in SAR, then an amount of SAR will be discounted from the original price, and the reflected sale price will be calculated and displayed on sale price text field.</li> <li>b. Discount amount will be 0 and the sale price is the original price(nothing is affected), and by the way it will be not applied in this case.</li> </ul> </li> </ol>

- c. The sale price will be changed as entered, and the reflected discount amount in SAR will be calculated and displayed in discount amount text field, and it can be only by SAR.
  - d. The discount amount will be zero.
- 4. Adding additional info:
  - a. The additional data title will be as entered.
  - b. A red highlighted field will be displayed.
  - c. The description and details of additional data will be saved as entered.
  - d. A “Delete info section” label will be displayed but nothing affected, it can be saved without any details.
- 5. Add Product Options:
  - a. The option title will be changed as entered.
  - b. The choices list will be as entered.
  - c. If one or both of title or choices are missed, then clicking of the add button will be invalid (will not cause addition of product option) and the admin can only cancel adding option operation by clicking “Cancel” button.
  - d. The showing option method will be changed as selected.
  - e. The default showing method will be selected automatically, which is (list).
  - f. 1) If Both title and choices are existing, clicking on add button will be valid and add the product option to the product.  
2) If one or both of title and choices are missed, clicking on add will cause nothing.
  - g. Adding product option operation will be cancelled.
- 6. Add Inventory & Shipping Details:
  - a. The product status will be changed as selected.
  - b. The default product statues will be selected automatically, which is “in stock”.
  - c. The SKU will be changed as it is entered.
  - d. Nothing will be affected, because each product has an automatic unique SKU generated by default.
  - e. The weight of the product will be changed as entered.
  - f. Nothing will be affected.
  - g. Nothing will be affected.
  - h. The product statues field will removed, and an inventory field will display and must be entered by the admin to show the product quantity left in the store.
- 7. The product will be added to the selected collection(s).

	8. A message dialog displayed with a message says: Before you promote this collection, save the changes you made. 9. The product will be saved and added to the products interface. 10. The product will not be saved and not added to the product interface.
<b>Actual Result</b>	The result is the same as expected.
<b>Verified(Yes/No)</b>	Yes

*Table 14 "Add a product" test case*

#### 5.1.1.3.5 Duplicate a product

The following table shows the test cases for the “Duplicate a Product” function are shown on the table bellows:

<b>Test ID</b>	<b>AddProduct_001</b>
<b>Prerequisite</b>	The admin has already logged in.
<b>Test Procedure</b>	<ol style="list-style-type: none"> <li>Click on “Duplicate Product” election from the “...” drop-down list on the selected product.</li> <li>The Duplicate Product interface will be displayed and admin performs(optional):               <ol style="list-style-type: none"> <li>Entering the product name.</li> <li>Missing the product name.</li> <li>Entering Ribbon.</li> <li>Missing Ribbon.</li> <li>Entering Price.</li> <li>Missing Price.</li> <li>Entering Description.</li> <li>Missing Description.</li> </ol> </li> <li>Apply on sale(optional):               <ol style="list-style-type: none"> <li>Entering discount amount by percent (%) or SAR.</li> <li>Missing the discount amount.</li> <li>Entering sale price.</li> <li>Missing sale price.</li> </ol> </li> <li>Adding Additional Info(optional):               <ol style="list-style-type: none"> <li>Entering data title.</li> <li>Missing data title.</li> <li>Entering a description.</li> <li>Missing a description.</li> </ol> </li> <li>Add Product Options:               <ol style="list-style-type: none"> <li>Entering option title.</li> </ol> </li> </ol>

	<ul style="list-style-type: none"> <li>b. Entering option choices.</li> <li>c. Missing option title or choices.</li> <li>d. Selection of option showing method.</li> <li>e. Miss-Selection of option showing method.</li> <li>f. Click on add</li> <li>g. Click on cancel</li> </ul> <ol style="list-style-type: none"> <li>6. Add Inventory &amp; Shipping Details(optional):             <ul style="list-style-type: none"> <li>a. Select the product status (in stuck, out of stuck).</li> <li>b. Miss-select the product status.</li> <li>c. Enter an SKU.</li> <li>d. Miss an SKU.</li> <li>e. Entering weight.</li> <li>f. Missing of weight.</li> <li>g. Not apply inventory slide bar</li> <li>h. Apply track inventory slide-bar</li> </ul> </li> <li>7. Select the collection(s) to be added in (optional).</li> <li>8. Click on create a coupon before save the collection (optional).</li> <li>9. Click on “Save” button.</li> <li>10. Click on Cancel button.</li> </ol>
<b>Expected Result</b>	<ol style="list-style-type: none"> <li>1. Add a product interface will be displayed.</li> <li>2. Applying the previous mentioned actions on add product interface will cause:             <ul style="list-style-type: none"> <li>a. The product name will be changed as entered.</li> <li>b. A red highlighted field will display with an icon with a tip says” Your product needs a name”.</li> <li>c. The ribbon will be displayed on the product picture on Jewelry type page.</li> <li>d. Nothing will be affected.</li> <li>e. The price will change as entered.</li> <li>f. A red highlighted field will display with an icon with a tip says” Price is invalid”.</li> <li>g. The description will be added to the product.</li> <li>h. Nothing will be affected.</li> </ul> </li> <li>3. Apply on sale will cause:             <ul style="list-style-type: none"> <li>a. 1) if discount amount by percent (%), then an amount of entered percent will be discounted from the original price, and reflected sale price to this percent amount will be calculated and displayed on the sale price text field.</li> </ul> </li> </ol>



- 2) if the discount amount in SAR, then an amount of SAR will be discounted from the original price, and the reflected sale price will be calculated and displayed on sale price text field.
- b. Discount amount will be 0 and the sale price is the original price(nothing is affected), and by the way it will be not applied in this case.
- c. The sale price will be changed as entered, and the reflected discount amount in SAR will be calculated and displayed in discount amount text field, and it can be only by SAR.
- d. The discount amount will be zero.
- 4. Adding additional info:
  - e. The additional data title will be as entered.
  - a. A red highlighted field will be displayed.
  - b. The description and details of additional data will be saved as entered.
  - c. A “Delete info section” label will be displayed but nothing affected, it can be saved without any details.
- 5. Add Product Options:
  - a. The option title will be changed as entered.
  - b. The choices list will be as entered.
  - c. If one or both of title or choices are missed, then clicking of the add button will be invalid (will not cause addition of product option) and the admin can only cancel adding option operation by clicking “Cancel” button.
  - d. The showing option method will be changed as selected.
  - e. The default showing method will be selected automatically, which is (list).
  - f. 1) If Both title and choices are existing, clicking on add button will be valid and add the product option to the product.  
2) If one or both of title and choices are missed, clicking on add will cause nothing.
  - g. Adding product option operation will be cancelled.
- 6. Add Inventory & Shipping Details:
  - a. The product status will be changed as selected.
  - b. The default product statues will be selected automatically, which is “in stock”.
  - c. The SKU will be changed as it is entered.
  - d. Nothing will be affected, because each product has an automatic unique SKU generated by default.
  - e. The weight of the product will be changed as entered.

	f. Nothing will be affected. g. Nothing will be affected. h. The product statues field will removed, and an inventory field will display and must be entered by the admin to show the product quantity left in the store. 7. The product will be added to the selected collection(s). 8. A message dialog displayed with a message says: Before you promote this collection, save the changes you made. 9. The product will be saved and added to the products interface. 10. The product will not be saved and not added to the product interface.
<b>Actual Result</b>	The result is the same as expected.
<b>Verified(Yes/No)</b>	Yes

*Table 15 "Duplicate a product" test case*

#### 5.1.1.3.6 Delete a product

<b>Test ID</b>	DeleteProduct_001
<b>Prerequisite</b>	Admin is logged into the system.
<b>Test Procedure</b>	1- Click on "Delete" button, chose one of the following cases: A. Click "Delete" button. B. Click "Cancel" button.
<b>Expected Result</b>	1- After clicking on "Delete" button, "Delete" and "Cancel" button will be shown A. product deleted successfully. B. product will be not deleted.
<b>Actual Result</b>	Result as expected
<b>Verified (Yes / No)</b>	Yes

*Table 16 "Delete a product" test case*

#### 5.1.1.3.7 Manage an order

- Filter By Status

<b>Test ID</b>	FilterByStatus_001
<b>Prerequisite</b>	Admin is logged into the system.

<b>Test Procedure</b>	1- click on "store order" button. 2- Select the status option from status drop-down list.
<b>Expected Result</b>	1- list of orders will be shown 2- The orders with the status option selected is appear
<b>Actual Result</b>	Result as expected
<b>Verified (Yes / No)</b>	Yes

*Table 17 "filter by status" test case*

- Change order status

<b>Test ID</b>	ChangeOrder Status_001
<b>Prerequisite</b>	Admin is logged into the system.
<b>Test Procedure</b>	1- click on "store order" button. 2- Check the check-box of the order needed to change their statues, then chose one of the following cases: A- Click "Fulfill" link, then chose one of the following cases: 1- Click "Mark as Fulfilled" button. 2- Click "Cancel" button. B- Click "Mark as paid" link, then chose one of the following cases: 1- Click "Mark as Paid" button. 2- Click "Cancel" button
<b>Expected Result</b>	1- list of orders will be shown 2- After Checking the check-box of the order needed to change their, statues "Fulfill" and "Mark as paid" links will be shown. A- Click "Fulfill" link 1- Order marked as fulfilled. 2- Order will not be marked as fulfilled B- Click "Mark as paid" 1- Order marked as paid. 2- Order will not be marked as paid.
<b>Actual Result</b>	Result as expected

Verified (Yes / No)	Yes
---------------------	-----

*Table 18 "Change order status" test case*

#### 5.1.1.3.8 Edit Customer

- View, Block and Delete member

Test ID	View_Block_DeleteMember_001
Prerequisite	Admin is logged into the system.
Test Procedure	<ol style="list-style-type: none"> <li>1- Click on "site members" button.</li> <li>2- Click on ( ... ) icon of the customer you want, then chose one of the following cases: <ol style="list-style-type: none"> <li>A- View member.</li> <li>B- Block member. <ol style="list-style-type: none"> <li>1- Click "block" button.</li> <li>2- Click "Cancel" button.</li> </ol> </li> <li>C- Delete member. <ol style="list-style-type: none"> <li>1- Click "Delete " button.</li> <li>2- Click "Cancel" button.</li> </ol> </li> </ol> </li> </ol>
Expected Result	<ol style="list-style-type: none"> <li>1- Member list will be shown</li> <li>2- After clicking on ( ... ) icon of the customer that you want, "View member", "Block member" and "Delete member" will be shown. <ol style="list-style-type: none"> <li>A- Member info will be shown.</li> <li>B- Block member. <ol style="list-style-type: none"> <li>1- Member will be blocked.</li> <li>2- Member will not be blocked.</li> </ol> </li> <li>C- Delete member. <ol style="list-style-type: none"> <li>1- Member will be deleted.</li> <li>2- Member will not be deleted.</li> </ol> </li> </ol> </li> </ol>
Actual Result	Result as expected
Verified (Yes / No)	Yes

*Table 19 "View, block, and delete member" test case*

- Unblock member

Test ID	UnblockMember_001
Prerequisite	Admin is logged into the system.
Test Procedure	<ol style="list-style-type: none"> <li>1- Click on "site members" button.</li> <li>2- Click on "More action" drop-down list, then chose "Blocked members".</li> </ol>

	3- Click on ( ... ) icon of the customer you want, chose "Restore Member" then you have tow choice A- Click "Restore" button. B- Click "Cancel" button.
<b>Expected Result</b>	1- Member list will be shown 2- Blocked members list will be shown 3- After clicking on ( ... ) icon of the customer that you want, "Restore member" will be shown. A- Member will be Restored. B- Member will not be Restored.
<b>Actual Result</b>	Result as expected
<b>Verified (Yes / No)</b>	Yes

Table 20 "Unblock member" test case

#### 5.1.1.3.9 Manage members permissions

- Adding a new admin

<b>Test ID</b>	AddingNewAdmin_001
<b>Prerequisite</b>	Admin is logged into the system.
<b>Test Procedure</b>	1- Click on "Roles & Permissions" button. 2- Click on "Add contributor" button A. Enter Valid email and chose role (admin) B. Click "Send Invite " button. C. Click "Cancel" button.
<b>Expected Result</b>	1- My contributors list will be shown 2- A form to fill contributor info will appear A. If invalid email is entered, then error message will be shown "double check" B. The new admin has been added C. The new admin has not been added
<b>Actual Result</b>	Result as expected

Verified (Yes / No)	Yes
---------------------	-----

Table 21 “Adding new admin” test case

## 5.2 Integration Testing

Integration Testing is applied after the component testing is done, in order to check that all interfaces are interacting with each other correctly and as expected to be. The purpose of the integration testing is to test the connection and integration of all components and to test separate subsystems before testing the system.

**Technique:** Function testing of the combined components in the incremental approach. It’s done by adding one component one at a time. that minimize execution time, hence testers do not wait for the whole project to be completed and increases the ability for bugs to appear in the code.

**Completion criteria:** When joining subsystems, the system must function as intended.

**Special Consideration:** Start with component testing if an unresolvable issue arises in the integration of some components.

### 5.2.1 Admin Homepage

The Table below shows the test cases for the integrated components in the admin Homepage.

Test ID	AdminHomepage_01
Prerequisite	Admin is logged into the system
Test Procedure	Try different sequences separately: <ol style="list-style-type: none"> <li>1. Add collection and repeat the component testing for add collection</li> <li>2. Modify collection and repeat the component testing for modify collection</li> <li>3. Delete collection and repeat the component testing for delete collection</li> <li>4. Add a product and repeat the component testing for add a product</li> <li>5. Duplicate a product and repeat the component testing for duplicate a product</li> </ol>
Exponent Result	The results are the same as the one’s in component testing
Actual Result	Result is same as expected

<b>Verified (Yeas/No)</b>	Yes
-------------------------------	-----

*Table 22 "Amin homepage" test case*

### 5.2.2 Customer Homepage

The Table below shows the test cases for the integrated components in the costumer Homepage.

Test ID	CostumerHomePage_001
<b>Prerequisite</b>	Customer must be logged in into system
<b>Test Procedure</b>	Try different sequences separately: <ol style="list-style-type: none"> <li>1. Add to the cart and repeat the component testing for add to the cart</li> <li>2. product quantity and repeat the component testing for</li> <li>3. Remove product and repeat the component testing for remove product</li> <li>4. Checkout and repeat the component testing for checkout</li> <li>5. Track orders and repeat the component testing for Track orders</li> </ol>
<b>Exponent Result</b>	The results are the same as the one's in component testing.
<b>Actual Result</b>	Result is same as expected
<b>Verified (Yeas/No)</b>	Yes

*Table 23 "Customer homepage" test case*

### 5.3 Data and Database Integrity Testing

Because of the JAWAHER's database is designed by WIX and not accessible by the JAWAHER's developer team, so the database will be tested as separate component. and it will be conducted to the web site to be sure that it works will on it without any data inconsistency in efficient way.

- Technique:
  - Each database access method is invoked for each with valid and invalid data.
  - Examine the database to ensure that data is populated as intended and review the returned data to certify that the correct data was retrieved.

- Completion criteria: All database access methods and processes operate as required without any corrupted data.
- Special consideration: Each operation done on the website will be reflected on the database and appeared on the website tables. such as submitting order by the customer will affect the orders table on the admin side.

#### 5.4 Security Testing

Security Testing should be done to assure that all users is able to access their own privileges, reach their own personal information, and are not allowed to reach other user's information. However, there is exceptions for some authorized users like the admin, who should be able to access and manage other user's accounts.

- **Technique:** Trying to access the system using incorrect passwords or unused user accounts should prevent the user from accessing the system.
- **Completion Criteria:** Security testing verifies that only registered users can enter their accounts.

#### 5.5 Acceptance Testing

After all the tests have completed, JAWAHER's developing team will explain all website functionalities and features to the client(JAWAHER Company), and a short survey will be requested from them, and their customers to measure their experience in using the website according to the listed criteria:

1. The utility of use
2. Efficient execution.
3. Ease of use.

In addition to that, JAWAHER's developing team will consider the website to be accepted if the client submits an acceptance report for them to be sure that the JAWAHER online jewelry store website meets their requirements.

#### 5.6 Performance Testing

JAWAHER website uses the performance testing to measures response times, stability during critical circumstances, and other time sensitive processes. The purpose of performance testing is to verify, validate, measure, and investigate if the performance requirements are met.

Performance test is usually conducted several times using different test cases and different input each time trying to push the system to the limits to check how it acts in these sensitive cases. In Addition, Performance tests can be used to measure system performance represented as a function of conditions such as hardware configurations or workload in most cases.

Technique: Perform several functions to check the validity of website response times.



Completion criteria: Test cases and transactions for every user should be done successfully without facing failures and within the allocated time duration.

### 5.7 Beta Testing

JAWAHER website available to real-world users allowing them to install the beta version and experiment the features. The development team will receive the feedback to discover issues, fix defects, and improve the level of performance for the actual release.

### 5.8 Regression testing

Regression Testing is a type of software testing to confirm that a recent change on code or adding new feature has not affected website existing features. Regression Testing is nothing but a full or partial selection of already executed test cases which are re-executed to ensure existing functionalities still works. This testing is done to make sure that new code changes should not have side effects on the existing functionalities. It ensures that the old code still works once the new code changes are done.

#### **Test cases:**

Regression Testing is required when there is a

- Change in requirements and code is modified according to the requirement
- Adding new feature to the software
- Defect fixing
- Performance issue fix

### 5.9 Recover testing

Since JAWAHER's developing team have used WIX to develop their website, the WIX SDK offers a method for duplicating the website, so after each a new component addition, the team has duplicated their website for recovery reasons in case of website crush. However, after many attempts of destroying JAWAHER website, there were two cases the team has recorded:

- there was no way to crush the website unless the admin select to delete it from the WIX system, and the recovery solution was as mentioned above that it will be recovered because they are making a website duplication after adding a new component, and any time they want to make a duplication they can do it.
- in case if someone has hacked the WIX SDK and destroy it, there is no recovery solution for this case.

## 5.10 Interface Testing

Interface testing is executed to evaluate the whole system and components' and how the data pass and control. It should guarantee that the interactions between these modules are working properly and the errors are handled correctly.

This section emphasizes on the connection between the website and the external component, mail server.

### 5.10.1 Mail Server

JAWAHER should be able to send emails to the users who forget their passwords. Also, it checks the correctness of the email before sending to it .

## 6. Pass/Fail Criteria

This section describes the type of criteria that are used to determine whether of each item of the system has passed or failed testing. For the JAWAHER website, the following requirements must be satisfied:

- Main functions for each user should work perfectly as referred in SRS and SDS.
- The user interface shall be designed to be well-understood by users.
- The user interface shall be designed to strict users from entering wrong inputs.
- The system shall handle all expected errors made by users.
- Discovering as much errors as possible in the system to debug them.
- The testing of critical functionalities must be passed successfully.

### 6.1 Suspension Criteria

- No internet connection (since JAWAHER is an online system requiring Internet).
- Unexpected failure of WIX'S online servers, causing unable to access the JAWAHER.
- When an error found that prevents the testing of the system.

### 6.2 Resumption Criteria

- Access to the internet then the user can access the website.
- Recovery of WIX'S online servers.
- The error is fixed then, the team will be resume testing.

### 6.3 Approval Criteria

- Successful results of test.
- Having all requirements and functionalities that specified in the SRS.
- Confirm that no errors are left out without correction.
- Approval by the client.

## 7. Testing Process

This section defines test deliverables, testing tasks, responsibilities, resources and schedule.

### 7.1 Test Deliverables

While implementing the testing stage, slowly this document will grow to its complete form (the STP document). After we finish, our team will represent the project.

### 7.2 Testing tasks

Testing tasks are listed below:

- Prepare the SRS and SDS documents to ensure that it meet the requirements. (writing skills)
- Produce the STP while working to test the system. (writing skills)
- Prepare the hardware test environment. (technical skills)
- Prepare the software test environment. (technical skills)
- Perform all test process to the software using vary methods. (programming skills)
- Handle faults that may occur during the test stage. (programming skills)
- Maintain the software if there is any change occurs. (technical skills)

### 7.3 Responsibilities

The duty of every member is testing and dealing with the errors that show up during the test phase, at that point it ought to be followed by completing the required document.

### 7.4 Resources

Resources	Description
<b>Hardware</b>	Personal device that has access to a moderate speed internet connection
<b>Software</b>	<ul style="list-style-type: none"><li>• Wix cloud-based web development platform.</li><li>• Windows OS 7 or higher.</li><li>• Mac OS</li></ul>
<b>Human</b>	Team members whose skills to complete the system

*Table 24 Project resources*

## 7.5 Schedule

Task No.	Project phase	Date
1	SRS	November 3 <sup>rd</sup> 2019
2	SDS	November 24 <sup>th</sup> 2019
3	Develop test case	November 29 <sup>th</sup> 2019
4	Troubleshoot errors occurred during testing	November 29 <sup>th</sup> 2019
5	Modify the system accordingly	November 29 <sup>th</sup> 2019
6	Develop STP document	November 29 <sup>th</sup> 2019

*Table 25 Project schedule*

## 8. Environmental Requirements

This section contains the environmental requirements of the hardware, software, security, tools, publications, risks and assumptions

### 8.1 Hardware

Because our software is a cloud-based website, PCs, tablets, or any device actually needs to be connected to valid internet connection to run the website successfully. We highly recommend using a PC and a high speed internet connection to run this kind software.

### 8.2 Software

Our software requires any kind of web browser to operate and function, despite the operating system being used. In addition, WIX is the tool we chose to run the system successfully.

### 8.3 Tools

The main tool in this project is the WIX tool, which is a third party cloud-based website. This software has provided us with all the necessary tools and functions to check for consistency and make sure that it is ready and good to go.

### 8.4 Publications

We must review the previous documents such as the SRS and SDS to complete the testing stages. This process helps to reassure that all the functional requirements are met and performance is as intended.

### 8.5 Risks and Assumptions

While building up the test plan, there were a few requirements with respect to test asset accessibility and functionality, just as the time imperatives.

- Test Resource Availability: our resource which is WIX tool, is sometimes affected by unapproachability when the sever is facing some technical issues. These issues might delay our testing process until they are resolved.
- Test Resource Functionality: WIX does not allow multiple developers to work and update the website concurrently, only one PC can work at that time.

## 9. Change Management

This section explains the further adjustments or updates and all thing that relies upon it for Jawaher Alnemer website. In the event that a change jumps out at the test plan, it must pursue a series of activities so as to be completely affirmed.

Team work is the core reason to any successful project. If any member wishes to update or change something in the requirements it has to be discussed between team members and the supervisor. Only when everyone agrees upon the changes, then they can be implemented, and the test plan will be modified accordingly.

## 10. Plan Approvals

The table below represents the plan approvers.

#	Name	Signature	Date
1	Zahra Maher Al-Nemer		8/12/2019
2	Reem Fadhel Aljishi		8/12/2019
3	Zahra Majed Al-Zawad		8/12/2019
4	Fatimah Abbas Alramadhan		8/12/2019
5	Fatimah Yousef Alomran		8/12/2019

*Table 26 Plan Approvals*