American International University-Bangladesh (AIUB)
Department of Computer Science
Faculty of Science &Technology (FST)
Summer 21 22

Section: A/ B/ E

Software Quality Assurance and Testing

Gregory's Olsen's

A Report submitted by

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Faculty of Science & Technology

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Revision History

Revision	Date	Updated by	Update Comments
0.1	2007.06.04	Scot Robinson	First Draft
0.2	2007.06.19	Amit Nimse	

1. TEST PLAN IDENTIFIER:RS-MTP01.3

2. REFERENCES

- Software Quality and Testing Course PowerPoint Slides
- Selenium: http://www.selenium.com
- For writing Test Case: https://www.geeksforgeeks.org/software-testing-test-case
- For Quality Attributes: http://shorturl.at/CMOV7/
- For Quality Attributes: SQAT - Ch.02 - Software Quality.pptx

3. INTRODUCTION

Background to the Problem

This is site with Gregory's Olsen's works with opportunity to book session. Site has Home, Work, Connect, Sessions and InsteOlsen tabs. Work tab contains portrait gallery, lifestyle gallery, travel gallery and motion gallery. Connect tab contains bio & press, clients, philanthropy and contact pages. Session tab contains three types of photo sessions. User can select and book some of them. InstaOlsen tab should lead user to Gregory's instagram. Below you can find detailed description of each tab.

Solution to the Problem

- What are the possible remedies you'll put up to address the issue? Why is this particular solution more suitable to tackle the issue? Is it possible to accomplish the business goal with the proposed solution?
- Give a succinct explanation of the software being specified and its function, mentioning any pertinent advantages, purposes, and goals.
- studies that have already been done in the problem area. What software options are now available to address the aforementioned issue?

4. REQUEIREMNT SPECIFICATION

4.1 System Features

A. Home

a. All pages (include Home) should have header
b. Header should be fixed on the top of each page, users should always be able to change location.
c. Main picture is a Greg's photo with signature (like it shown above) Preview photos should have portrait, lifestyle, travel and motion pictures. When selecting one of the main pages should change to a preview photo with the corresponding signature. Also, it will be better if you add links to corresponding galleries.

d. And final part is the footer with studio information: address, phone, email, and link.

B. Work

The submenu should have several types of galleries. It's described below

B1. Portrait, Lifestyle, Travel, Motion

a. This page should contain a photo gallery with portraits. The page title is Portrait Gallery.
b. There are 4 pages that contain 12 photos. Except 4th page - it contains only 4 photos. Preview photos should have 225px*130px size, and natural size in multiple photos.
c. Each photo should have a grey frame, and it should become white if cursor over. All preview photos should have tooltip with photo number (e.g. p5).
d. Multiple photos should open if clicked on each photo and Add pagination below preview photos.
e. Each work tab with different photos which is given with the requirement.

C. Connect

Submenu should have information about Greg: his history, his clients etc. It's described below

C1. BIO & PRESS

a. This page is about Greg's life and his articles in press. Page title is Bio & Press.

C2. Clients

a. This tab should lead user to page with list of all customers. Page title is Clients Gallery

C3. PHILANTHROPY

a. This tab should lead user to page with Greg's article "How photographing changed my life." with his famous photo. Page title is Philanthropy

C4. CONTACT

a. This tab should lead user to feedback page
b. Feedback form to sending letters for Greg's

D. Sessions

This tab contains three types of available sessions: Mini Studio Session, Mini Outdoor Session and Standard Session. Page title is Our Sessions

D1. Book

This page contains book information: Photo + Start price + Additional subject's dropdown + Book button + Details + Back button Page title is Book Session. Additional subject's dropdown should have 10 values + none. It means the user can choose the quantity of people for photo session.

D2. Book Information

Page contains two info blocks: Session Information and Contact Information. Page title is Book Information. Session information: Photo + + Additional Subjects: + Total price Total price calculation rule: = start price + 55*

D3. Payment

This page has usual payment form

E. InstaOlsen

Add link to Greg's Instagram: https://www.instagram.com/ph_gr.olsen/

4.2 System Quality Attributes

Usability: This can be evaluated based on how simple it is to use. The software should be simple to use. Usability means how easily user (patient) can use this system and get services. If the system is not
user friendly, then patient may lose their interest to find solution here.
Priority Level: High

Integrity: Integrity this factor deals with the system security that is, to prevent access to unauthorized persons. This attribute is most important to provide security. When patient will want to pay in online, the transition process should be secured.
Priority Level: High

Flexibility: It is used as an attribute of various types of system. Users can easily access and adapt the software so frequently to utilize their needs. The software is organized according to user demand and user easily understand the change.
Priority Level: High

Performance: Performance specifications specify how quickly or how successfully a system must carry out particular functionalities. Speed, throughput, capacity, timing. It also addresses how the system's performance will suffer in a situation of overload (when more user doing transection at a time).
Priority Level: High

Portability: The System should be so simple transform one medium to another.
Priority Level: Medium

Efficiency: The user will experience decreased performance if the system is using all of the resources, making it inefficient. Real-time applications cannot be employed with an inefficient system. As sometimes user will use it in the emergency situation, It should be more efficient to use.
Priority Level: High

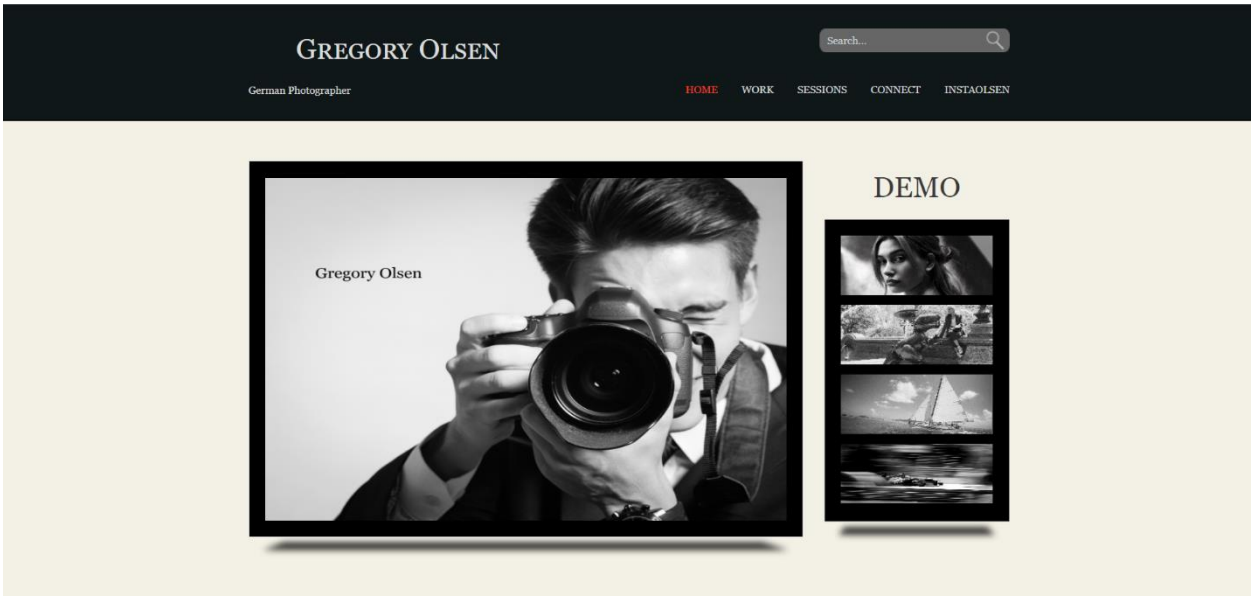
Maintainability: The system will be well documented and it will be designed to be easier maintenance. The system shall not be shut down for maintenance more than once in 24 hours. Maintenance should be cost-effective and easy.
Priority Level: High

Testability: If the System face any error or defect then it must have the testing ability of that error or defect.
Priority Level: High

4.3 System Interface

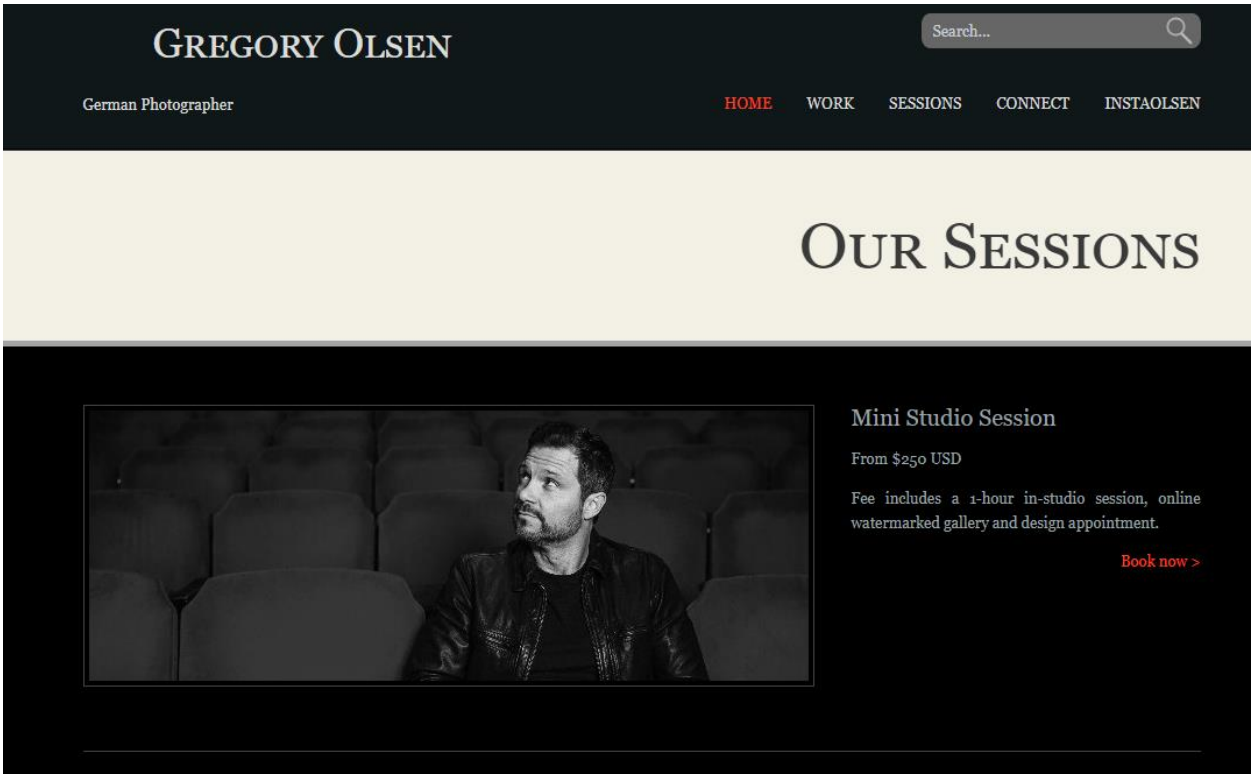
- Homepage

- Work

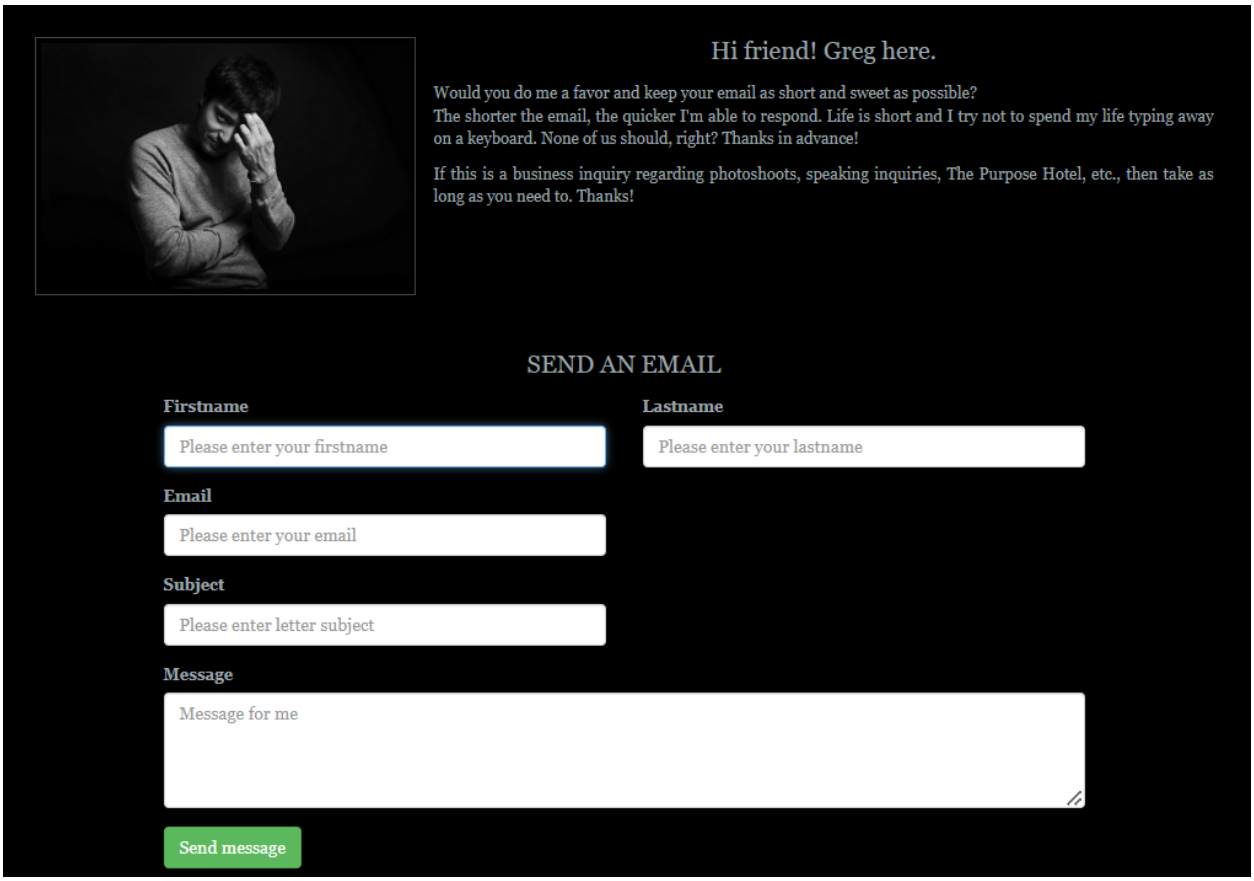



GREGORY OLSEN
German Photographer
Search...
HOME
WORK
SESSIONS
CONNECT
INSTAOLSEN
PORTRAIT GALLERY
1
2
3
4
Next

- Session


GREGORY OLSEN
German Photographer
Search...
HOME
WORK
SESSIONS
CONNECT
INSTAOLSEN
OUR SESSIONS
Mini Studio Session
From $250 USD
Fee includes a 1-hour in-studio session, online watermarked gallery and design appointment.
Book now >

- Connect


Hi friend! Greg here.
Would you do me a favor and keep your email as short and sweet as possible?
The shorter the email, the quicker I'm able to respond. Life is short and I try not to spend my life typing away on a keyboard. None of us should, right? Thanks in advance!
If this is a business inquiry regarding photoshoots, speaking inquiries, The Purpose Hotel, etc., then take as long as you need to. Thanks!
SEND AN EMAIL
Firstname
Please enter your firstname
Lastname
Please enter your lastname
Email
Please enter your email
Subject
Please enter letter subject
Message
Message for me
Send message

4.4 Project Requirements

Using pre-determined and frequently particularly allotted inventories of time, money, resources, and equipment, a project is a planned activity that achieves a specific objective. It will take a business case to support the outcome, which could be a product or service. Projects are extracurricular activities that take place outside of a company's regular business operations. They have definite beginning and ending dates and a distinct outcome. The ability to create the output to the specified quality, within budget, and within the given time-frame is what defines success in delivery. In actuality, though, these three might need to be traded off in some way. For instance, if the deadline is strict and immovable, the budget might need to be raised to pay for additional resources, or some quality might need to be sacrificed. Beyond the continuing services they offer, discrete projects, frequently with a significant technical component, are something that librarians in every industry are dealing with more and more of. In many of these projects, the collection is digitally preserved in full or in part, and services are made online accessible to users. In a world that is changing quickly, the transition from print to digital has had a significant impact on librarians' work. They are no longer the caretakers of knowledge and must now follow user requirements more closely than ever. To make sure they meet consumer needs and stay on top of the competition, many firms perform systematic reviews. On the same budget or one that has not expanded in line with service demands, they frequently need to also raise their level of service.

- Total Development time: 8 months
- Total working hours needed: (8*22) *8=1,408 hours ;(1 month =22 working day & per day working time 8 hours)
- Requirement analysis & Documentation times needed: 22*8=176 hours
- Times needed for developing system: (4*22) *8= 704 hours
- Times needed for Testing & Debugging: (2*22) *8=352 hours
- Revision time: (1*22) *8= 176 hours
- Resource:
    - Developer team of 6 engineers.
    - Software Quality assurance team of 3 engineers.
    - Custom build Pcs 10
    - Android smartphones 2
    - LAN connection
    - Testing tools
- Total budget: 1,350,000 BDT
- Cost estimation:
    - Developers’ salary:(704*150) *6= 633,600 BDT ;(Per hour salary= 150 BDT)
    - SQA engineers’ salary: (352*150) *3= 158,400 BDT;(Per hour salary= 150 BDT)
    - Purchase necessary equipment, Hardware & testing tools: 200,000 BDT
    - Total cost: 992,000 BDT

5. FEATURES NOT TO BE TESTED

We have three modules and a total of seven features in our project. Out of these seven features, one will not be tested.

1.Multi-language: The language will automatically be set to English. We performed a survey, and the majority of respondents indicated that English was their preferred language for the app. However, a lot of users preferred Bangla for the app language, so we will address that. This feature, though, is not given top priority. Currently, we won't test this functionality.

6. TESTING APPROACH

6.1 Testing Levels

Testing at the Unit, System, Integration levels will be done for the "Parental Security Application." The majority of the testing, however, will be carried out by the test manager with the assistance of the development teams due to the budgetary and timeline restrictions.

Unit Testing: Unit testing is also known as individual testing and white box testing. When a module is finished, the developer compiles it to confirm that it is functional. This testing will take place in our system once a developer completes the design of any page.

Control Flow Testing: It looks for flaws brought on by improperly written program code. It is testing in a white box. In our solution, the developer will pick a specific section of a large program to create the testing path and Test cases represented by the program's control graph. The nodes and edges come together to form the Control Flow Graph.

Integration Testing: The purpose of integration testing is to validate that all of the modules are communicating properly. With assistance from the individual developers as needed, it is carried out by the test manager and development team leader. When our system's developers create two or more modules, the testing team will combine these modules and look for incompatibility.

System Testing: After the integration testing is complete, this testing is conducted. Here, it examines how the entire system functions, often from the viewpoint of the client. It is testing in a black box. The testing team will integrate the entire system in our system. The system would then be assembled, and any problems would be fixed as soon as they were discovered.

Acceptance Testing: The examination is official. This testing process confirms that the customer's demand is fully functional. Customers and end users will test the entire system and provide feedback.

6.2 Test Tools

The testing methodologies used by the tools vary, and as a result, their feature sets do as well.

1. Unit Testing: Individual software modules or functionalities are tested as part of a sort of testing called unit testing. Testing each component or function is its main objective. The smallest piece of an application that can be tested is called a unit. It often only has one or a few inputs and one output. We must require selenium as a software testing tool for that.

2. Integration Testing: Integration testing is a sort of testing designed to examine how various components work together, how they interact, how subsystems combine to form a single standard system, and how well the code complies with the requirements and we need to use selenium as our testing tools for integration testing. These are web-based tools.

3. System Testing: System testing makes sure an application works as intended. This procedure, which is a form of black-box testing, focuses on an application's functionality. For instance, system testing may examine whether each type of user input results in the desired output throughout the application. System testing will be done using here with selenium. Selenium is a tool for codeless automated testing that offers automated testing options for our website. Test cases are easily and effectively managed and executed by selenium automates.

Testing tools, we used for testing are given below:

I. Chrome Driver: We have installed it to complete our program
II. Selenium Web Driver: Selenium is mandatory for the testing approach.
III. MySQL: Need this for database connection.
IV. Postman

6.3 Meetings

We arrange a meeting in every week to evaluate progress to date and to identify error trends and problems as early as possible. We met with development and the project manager once every two weeks as well. The testing phase of this project will last 44 days, giving it a total lifespan of 32 weeks. We have around 8 weeks left in this period.
In the first seven weeks, unit, integration, and system testing will be used to test every module. The QA Engineers will complete the entire testing step within this time. If there is a flaw, it will be fixed before the module is tested once more. The testing by customers or other parties will take two weeks. Acceptance testing will take place during this stage. They will evaluate the system for us and provide a report.
If there is a problem, the review report will be looked up and examined after it is received from the vendor in order to fix it. The time it takes to finish the problems and take the test will be one week. And there will be a general meeting every Friday or Saturday at 9:00 PM. We scheduled an extra meeting for final checking of the test report

7. TEST CASES/TEST ITEMS

7.1 Home page

Project Name:			Test Designed by:	
Test Case ID: home_1			Test Designed date:	
Test Priority (Low, Medium, High): High			Test Executed by:	
Module Name: Home page			Test Execution date:	
Test Title: verify homepage components				
Description: Test website home page				
Precondition (If any): No condition				
Test Steps	Test/Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website	1. Check head 2. Check navigation link 3. Check dropdown menu 4. Check body element 5. Check footer	As per the requirement design.	As expected	Pass
Post Condition:				

7.2 Work page

Project Name:			Test Designed by:	
Test Case ID: work_1			Test Designed date:	
Test Priority (Low, Medium, High): High			Test Executed by:	
Module Name: Work page			Test Execution date:	
Test Title: verify work components				
Description: Test website work page				
Precondition (If any): Home page				
Test Steps	Test/Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Click on work page	1. Check all sub menu 2. Check photo viewer 3. Check web component	As per the requirement design.	As expected	Pass
Post Condition:				

7.3 Session page

Project Name:			Test Designed by:	
Test Case ID: session_1			Test Designed date:	
Test Priority (Low, Medium, High): High			Test Executed by:	
Module Name: Session page			Test Execution date:	
Test Title: verify session page components				
Description: Test website session page				
Precondition (If any): Home page				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Click on session page	1. Check all sub menu 2. Check photo viewer 3. Check web component	As per the requirement design.	As expected	Pass
Post Condition:				

7.4 Feedback page

Project Name:			Test Designed by:	
Test Case ID: feedback_1			Test Designed date:	
Test Priority (Low, Medium, High): High			Test Executed by:	
Module Name: Session page			Test Execution date:	
Test Title: verify session page components				
Description: Test website session page				
Precondition (If any): Home page				
Test Steps	Test/Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Click on connect page 3. Fill all the field 4. Click feedback button		Website owner get the feedback by mail	As expected	Pass
Post Condition:				

8. ITEM PASS/FAIL CRITERIA

The website made for photographer who might display his photograph with his client. So as per the requirement main focus of the testing is the design of the website is user friendly and all the design meet with the given required design. Therefore, all designs are fulfill the client requirement so the testing is pass.

The user will go to the website. Then login to the system and select the needed support. Click the 'Finish' button. To pay then select a payment gateway service and enter the amount. That is the payment will be made and the user will notify. So, the test case passed. If the user does get any confirmation message, the test case fails. The user can review the services.

First the user goes to the website. Then give feedback and click the submit button. The test status is passed and the system will show the comment. The test case will fail if do not use any services.
So, after performing all test cases, we can ensure that our test case passed successfully.

9. TEST DELIVERABLES

- Acceptance test plan
- System/Integration test plan
- Unit test plans/turnover documentation
- Screen prototypes
- Report mock-ups
- Defect/Incident reports and summaries
- Test logs and turnover reports

10. STAFFING AND TRAINING NEEDS

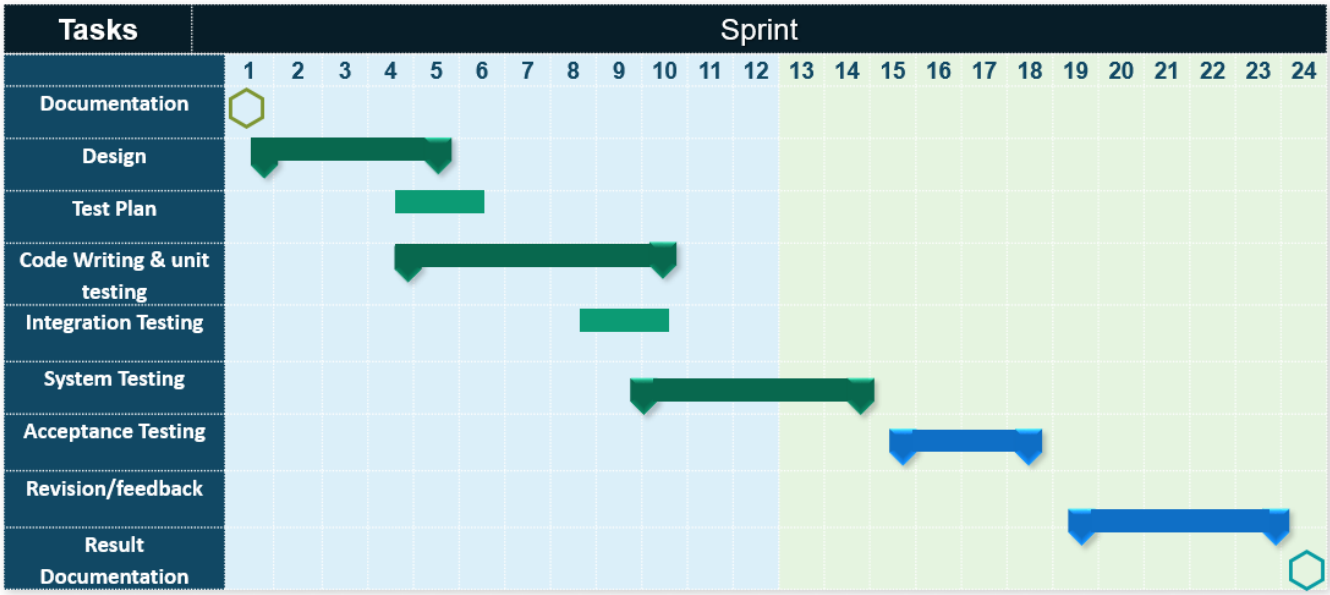
With the initial project planning, the project manager can take the responsibility of a test engineer. Following the completion of the fundamental form, the approval and confirmation tests necessitate the involvement of two full-time testers. From them one should be tester at the beginning who will be the assistant of project manager. Then the project lead and Manager must work with the workforce of an organization to train on the internal operation of a project stream and to learn about more. In between if they need any kind of must help or solution then they may hire expert for specific amount of hour

11. RESPONSIBILITIES

Serial	Task	Start	Week	Responsibility
1	Documentation			Product owner
2	Design			Testing team lead
3	Test Plan			Testing team lead
4	Code Writing & unit testing			Developer
5	Integration Testing			Developer
6	System Testing			Tester
7	Acceptance Testing			End user
8	Revision/feedback			Testing team lead
9	Result Documentation			Testing team lead

12. TESTING SCHEDULE

Time has been allocated within the project plan for the following testing activities. The specific dates and times for each activity are defined in the project plan timeline. The persons required for each process are detailed in the project timeline and plan as well. Coordination of the personnel required for each task, test team, development team, management and customer will be handled by the project manager in conjunction with the development and test team leaders. The schedule must be done using any PM tool.


Tasks
Sprint
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Documentation
Design
Test Plan
Code Writing & unit testing
Integration Testing
System Testing
Acceptance Testing
Revision/feedback
Result Documentation

13. PLANNING RISKS AND CONTINGENCIES

The required number of test employee may not be obtained on time, which can be a danger for the working schedule. The schedule must be updated in time to account if needed. At the time of working some software may need to use which are not available at that moment. For this the person who will realize it firstly he/she should inform the lead and lead must manage these resources if they are must. Similarly, if any contingencies will appear at the time of using available resource, then the person who will face should knock the lead immediately. If the possibility of finishing project in the deadline will decrease day by day manager or main project lead should take some necessary steps to fix with ay parameter even the schedule may need to change too. If any slight problem of different team will appear then tester may knock them directly

14. APROVALS

Project Sponsor - Steve Sponsor	
Development Management - Ron Manager	
EDI Project Manager - Peggy Project	
RS Test Manager - Dale Tester	
RS Development Team Manager - Dale Tester	
Reassigned Sales - Cathy Sales	
Order Entry EDI Team Manager - Julie Order	