



American International University-Bangladesh (AIUB)

Department of Computer Science

Faculty of Science & Technology (FST)

Summer 21- 22

SN	Student Name	Student ID
1	Arifuzzman	19-40308-1
2	Sadia Haque Rupa	19-40620-1
3	MD Isfaq Anam	19-40334-1
4	Shochi Akter	19-40235-1

Section: F

Software Quality Assurance and Testing

EK PAY

Under the supervision of

ISRAT JAHAN MOURI

Software Test Plan

for

EK PAY

Version 1.0 approved

Prepared By:

Arifuzzman

Sadia Haque Rupa

Md Isfaq Anam

Shochi Akter

Date 24-4-22

Table of Content:

1.TEST PLAN IDENTIFIRE-----	4
2.REFERENCES-----	4
3.INTRODUCTION-----	4-5
3.1- Background of the problem	
3.2- Solution of the problem	
4.REQUIREMENT SPECIFICATION-----	5-9
4.1-System Features	
5.FEATURES NOT TO BE TESTED-----	9
6.TESTING APPROACH-----	9-10
6.1- Testing levels	
6.2- Test tools	
6.3- Meetings	
7.TEST CASES-----	11-19
8.ITEM PASS/FAIL CRITERIA-----	19
9.TEST DELIVERABLES-----	19
10.TESTING SCHEDULES-----	20
11.PLANNING RISK AND CONTINGENCIES-----	20
12.APPROVAL-----	20

1. Revision History

Revision	Date	Updated by	Update Comments
0.1	17-8-22	Rupa	First Draft
0.2	17-8-22	Arifuzzman	First Draft
0.3	18-8-22	Rupa	Second Draft
0.4	18-8-22	Isfaq	Second Draft
0.5	19-8-22	Arifuzzman	Third Draft
0.6	20-8-22	Shochi	Fourth Draft
0.7	21-8-22	Rupa	Sixth Draft
0.8	22-8-22	Isfaq	Seventh Draft
0.9	23-8-22	Rupa	Eight Draft

1. TEST PLAN IDENTIFIER: RS-MTP01.3

2. REFERENCES

- Software Quality Assurance

By Ivan Mistrik, Richard M Soley, Nour Ali, John Grundy, Bedir

- Unit Testing Principles, Practices, and Patterns

By Vladimir Khorikov

3. INTRODUCTION

Background To The Problem

Utility services mean the different types of services we use in our day-to-day life from different service providers for various utilities such as electricity, water, gas, E-services, internet etc. The service providers bill the customers for the consumption of these utilities. The consumers pay these bills to some particular banks and the banks notify the service providers about the payment. The current process of utility bill collection and notification process in our country is manual. The bill paper is in black and white that the paper has a particular format and the billing information is entered by hand for each bill. This process of bill paper preparation involves a great deal of work. again when the consumer goes to the bank to pay the bill, all the information of payment is entered in . lger by hand by the bank officer. This

increases the delays of the consumer in the queue in the bank when they go to pay the bill. It is also a troublesome job for the bank officers to enter all the information. This manual process is time-consuming, inconvenient, tedious, and on top of that expensive.

Solution To The Problem

We can easily pay the bills of water, electricity, gas, e-services, internet etc. through the EK Pay government portal. EK Pay is Bangladesh's largest payment processor providing complete bill payment services to consumers and merchants. EK pay is an integrated bill payment platform with the integration of different payment channels and numerous service providers/ organization for payment of bills institutions fee others under a single window. This one-stop payment platform provides an interoperable and accessible "Anytime Anywhere" bill payment service easily accessible through online and network of agents to all customers across Bangladesh With convenience, reliability, and secure mode of transactions. Saving time, cost and visit for the citizens as they do not need to move different banks for paying the bills.

4. REQUIREMENT SPECIFICATION

4) System Features:

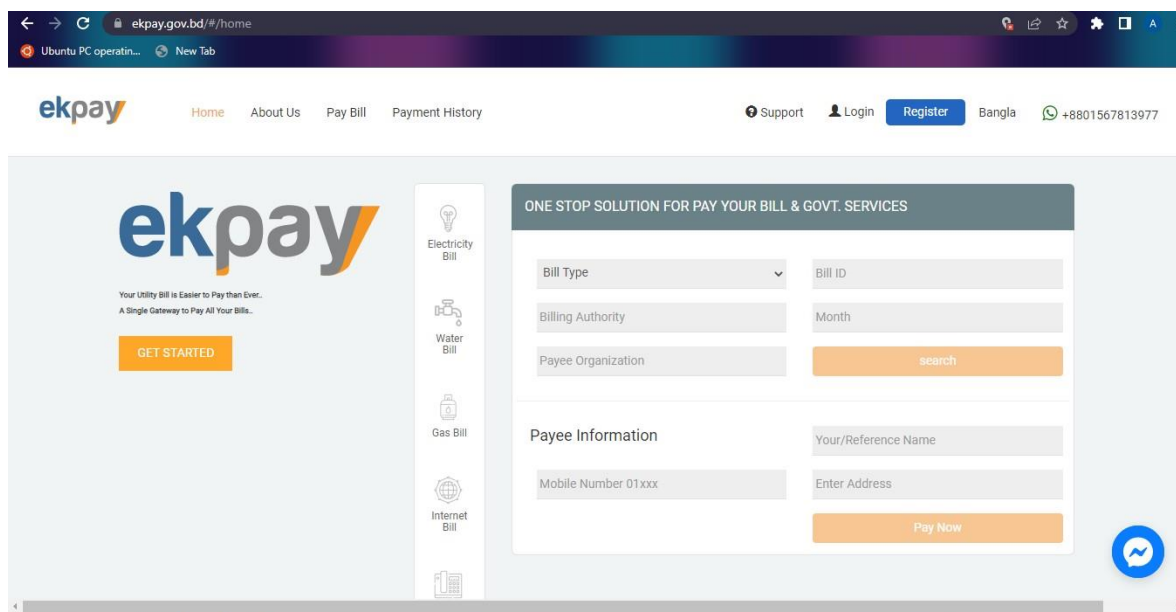
1. System Login

Functional Requirements:

- 1.1- The software shall allow users to log in with their given username and password
- 1.2- If the username and/or password have been inserted wrong more than three times, the random verification code will be generated by the system to retry the login.
- 1.3- If the number of login attempt exceed its limit (5 times), the system shall block the user account login for one hour.

Priority Level: High

Precondition: user has valid user id and password

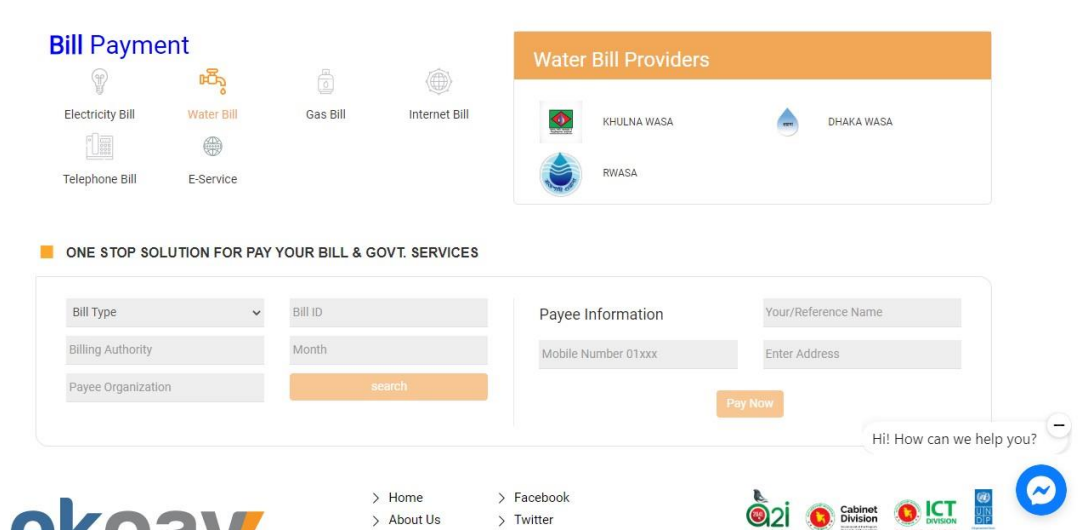


2. Pay Water Bill

- 2.1- The system will show an interface with area-wise WASA center names.
- 2.2- The user must select one center among them.
- 2.3- The user must provide a bill number to pay the bill
- 2.4- If the bill number is not valid, the system will ask for the valid bill number to proceed with the payment.

Priority Level: High

Pre-Condition: The user must log in to the system before attempting to pay bills.



3. Pay Electricity Bill

- 3.1- The system will show an interface with different postpaid options.
- 3.2- The user must select one among them.
- 3.3- The user must provide a date, mobile number, and bill number to pay the bill
- 3.4- If any of the data is not valid, the system will ask for the valid data to proceed with the payment.

Priority Level: High

Pre-Condition: The user must log in to the system before attempting to pay bills.

4. Get E-service

- 4.1- The system will show an interface with different postpaid options.
- 4.2- The user must select one among them.
- 4.3- The user must provide a date, mobile number, and bill number to pay the bill
- 4.4- If any of the data is not valid, the system will ask for the valid data to proceed with the payment.

Priority Level: High

Pre-Condition: The user must log in to the system before attempting to pay bills.

5. Pay Gas Bill

- 5.1- The system will show an interface with three area-based gas providers.
- 5.2- The user must select one among them.
- 5.3- The user must provide a date, mobile number, and bill number to pay the bill
- 5.4- If any of the data is not valid, the system will ask for the valid data to proceed with the payment.

Priority Level: High

Pre-Condition: The user must log in to the system before attempting to pay bills.

The screenshot displays the 'ekpay' website's 'Bill Payment' interface. At the top, a navigation bar includes 'Home', 'About Us', 'Pay Bill', and 'Payment History'. User information at the top right shows 'Support', a profile icon, '02020202', 'Bangla', and a WhatsApp contact '+8801567813977'. The main content area is titled 'Bill Payment' and features a grid of service icons: Electricity Bill, Water Bill, Gas Bill (highlighted in orange), Internet Bill, Telephone Bill, and E-Service. To the right, a 'Gas Bill Providers' section lists 'JALALABAD', 'BAKHRABAD GAS', and 'PASCHIMANCHAL GAS'. Below this, a banner reads 'ONE STOP SOLUTION FOR PAY YOUR BILL & GOVT. SERVICES'. The payment form includes fields for 'Bill Type' (dropdown), 'Bill ID', 'Billing Authority', 'Month', 'Payee Organization', and 'Payee Information' (with 'Mobile Number 01xxx' pre-filled). A 'Your/Reference Name' field and an 'Enter Address' field are also present. A 'search' button is located below the 'Month' field, and a 'Pay Now' button is at the bottom right. A chatbot bubble with the text 'Hi! How can we help you?' is visible in the bottom right corner.

6. Pay Internet Bill

- 6.1- The system will show an interface with the BTCL domain.
- 6.2- The user must provide the bill number to proceed.
- 6.3- If any of the data is not valid, the system will ask for the valid data to proceed with the payment.

Priority Level: High

Pre-Condition: The user must log in to the system before attempting to pay bills.

7. Show Transactions

- 7.1- The user has to put the transaction number/Phone number and the date up to which the user wants to see the transaction.
- 7.2- If the transaction number is not the valid system will ask for the valid number to show the transaction.

Priority Level: Moderately High

Pre-Condition: The user must log in to the system before attempting to pay bills.

8. Show User Profile

- 8.1- If the user clicks “My Profile” the system will display an interface with Name, Phone Number, Email, NID Number, DOB, Address, and Gender. Where users can edit the data of these fields.

Priority Level: High

Pre-Condition: The user must log in to the system before attempting to pay bills.

9. About Us

- 9.1- Whenever the user clicks “About Us”, the system will show the information about the software.

10. Sign Out

- 10.1- If the user clicks “Sign Out” The system will direct the user to the sign in page.

5. FEATURES NOT TO BE TESTED

- Edit User Profile (Personal Information)
- Edit Admin Profile (Personal Information)
- Networking Testing
- Interconnection between database table
- Language (Default language is English)
- Not a part of the Software's current release.

6. TESTING APPROACH

6.1 Testing Levels

Our system will be tested by the test manager and the development team and they will perform unit testing. system testing and Acceptance testing.

Unit Testing

Unit testing will be carried out by the developer utilizing the white box testing methodology. The development team leader will then give his or her approval. Before unit testing is acceptable, the programmer will give it to the team leader. The test subject will also receive all the information related to this testing. Control flow testing, data flow testing, and domain flow testing will be included under unit testing.

System Testing

After unit testing all the function will be attached together and test the system as a whole. This testing will be performed by the test manager and development team leader with the individual developer. And the software is meeting the customer requirement or not is also tested on it.

Acceptance Testing:

After the unit testing and System testing we will do the final testing it is acceptance testing. This testing process will be done by the end user or beta testing team they will test the system and test requirement criteria is full filled or not by the software. If this is passed then the software will be ready for delivery.

6.2 Testing Tools

Selenium: Selenium is a testing tool that fell to a host of manual testers, enacting and reenacting hundreds of test case scenarios on all benchmarked browsers, flagging what broke and trying to pinpoint the source of that breakage.

Ranorex : Ranorex is a [GUI test automation](#) framework provided by [Ranorex GmbH](#), a software development company. The framework is used for the testing of desktop, web-based and mobile applications.

Tosca: Tosca the test suite from [Tricentis](#), is the leading solution for functional software testing. Both agile as well as waterfall project workflows are supported. The quality of the software is guaranteed by a small number of test sequences.

Watir: Watir, pronounced as water, is a group of Ruby libraries for automated web browsers. It allows writing the tests which are easy to read and maintain. In other words, it is a simple and flexible tool.

6.3 Meetings

Meeting Date	Meeting Criteria	Objective
19-8-22	Feature Analysis	<ul style="list-style-type: none"> • Check the functions • System working process
20-8-22	Big Fixed	<ul style="list-style-type: none"> • Send the bugs for decoding • Solve the bugs •
21-8-22	Feature Analysis	<ul style="list-style-type: none"> • Again check the function after regression testing
22-8-22	Revise The system	<ul style="list-style-type: none"> • Check the whole system • Recheck requirement • Run the system

7. TEST CASES/TEST ITEMS:

Project Name: EK PAY			Test Designed by: Sadia Haque	
Test Case ID:FR_1			Test Designed date: 19-8-22	
Test Priority: Test Priority (Low, Medium, High): High			Test Executed by: Sadia Haque	
Module Name: Login Session			Test Execution date:19-8-22	
Test Title: verify login with valid username and password				
Description: Test website login page				
Pre-condition:				
Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
1. Go to the website 2. Enter a username 3. Enter the password 4. Click submit	Username: 02020202 Password: 321	Users should log in to the application	As expected,	Pass
Post Condition: The user is validated with the database and successfully logs in to the account. The account session details are logged in the database.				

Project Name: EK PAY	Test Designed by: Sadia Haque
Test Case ID:FR_2	Test Designed date: 19-8-22
Test Priority (Low, Medium, High): High	Test Executed by: Sadia Haque
Module Name: Pay Water Bills	Test Execution date:19-8-22
Test Title: verify the water bill paying method with a valid bill number	
Description: Test water bill process	
Pre-condition: The user must register to the system.	

Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
1. Open the software 2. Go to the “Water Bill Section” 3. Select WASA office 4. Enter the bill number 5. Click “Show Bill”	Bill Number: 123456790 Bill Type: Meter/Non-Meter	A billing document will appear.	As expected,	Pass
Post Condition: A payment application document will be recorded by the software.				

Project Name: EK PAY			Test Designed by: Sadia Haque	
Test Case ID:FR_3			Test Designed date: 19-8-22	
Test Priority (Low, Medium, High): High			Test Executed by: Sadia Haque	
Module Name: Pay Electricity Bills			Test Execution date:19-8-22	
Test Title: verify the electricity bill paying method with a valid bill number				
Description: Test electricity bill process				
Pre-condition: The user must register to the system.				
Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
1. Open the software 2. Go to the “Electricity Bill” 3. Select a postpaid option. 4. Enter the bill number 5. Click “Show Bill	Bill Number: 123456790	A billing document will appear.	As expected,	Pass
Post condition: A payment application document will be recorded by the software.				

Project Name: EK PAY			Test Designed by: Sadia Haque	
Test Case ID:FR_4			Test Designed date:19-8-22	
Test Priority (Low, Medium, High): High			Test Executed by: Sadia Haque	
Module Name: Pay Gas Bills			Test Execution date:19-8-22	
Test Title: verify gas bill paying method with a valid bill number				
Description: Test the gas bill process				
Pre-condition: The user must register to the system.				
Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
1. Open the software 2. Go to the “Gas Bill” 3. Select any gas provider area. 4. Enter the bill number 5. Click “Show Bill”	Bill Number: 123456790 Mobile Number: 016*****	A billing document will appear.	As expected,	Pass
Post condition: A payment application document will be recorded by the software.				

Project Name: EK PAY	Test Designed by: Sadia Haque
Test Case ID:FR_5	Test Designed date:19-8-22
Test Priority (Low, Medium, High): High	Test Executed by: Sadia Haque
Module Name: Pay Internet Bills	Test Execution date:19-8-22
Test Title: verify the internet bill paying method with a valid bill number	
Description: Test the internet bill process	
Pre-condition: The user must register to the system.	

Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
1. Open the software 2. Go to the "Internet Bill" 3. Click BTCL 4. Enter the bill number 5. Click "Show Bill"	Bill Number: 123456790	A billing document will appear.	As expected,	Pass
Post condition: A payment application document will be recorded by the software.				

Project Name: EK PAY				Test Designed by: Isfaq Anam	
Test Case ID: FR_6				Test Designed date:19-8-22	
Test Priority (Low, Medium, High): High				Test Executed by: Isfaq Anam	
Module Name: Get E-services				Test Execution date:19-8-22	
Test Title: verify the E-service module.					
Description: Test the E-service process.					
Pre-condition: The user must register to the system.					
Test Steps		Test Data	Expected Result	Actual Result	Status (Pass/Fail)
1. Open the software 2. Go to the “Internet Bill” 3. Select 1 of 4 options 4. Enter required data. 5. Click “Show Bill”		Reference ID/Payment token/Tracking number/Applicants ID	A Billing document will appear.	As expected,	Pass
Post condition: A payment application document will be recorded by the software.					

Project Name: EK PAY			Test Designed by: Isfaq Anam	
Test Case ID: FR_7			Test Designed date:19-8-22	
Test Priority :(Low, Medium, High): High			Test Executed by: Isfaq Anam	
Module Name: Registration			Test Execution date:19-8-22	
Test Title: Verify the user registration process				
Description: Test the registration module working or not				
Pre-condition: User have to go the Website And choose the registration Option				
Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
1. Go to the website 2. Give user id 3. Give a password 4. Confirm password 5. Give a valid Phone number 6. Click Next	Give the OTP	An OTP will come to the user given phone number	OTP doesn't come	Fail
Post condition:				

Project Name: EK PAY			Test Designed by: Arifuzzman	
Test Case ID: FR_8			Test Designed date:20-8-22	
Test Priority :(Low, Medium, High): High			Test Executed by: Arifuzzman	
Module Name: Home			Test Execution date:20-8-22	
Test Title: Verify the user Home interface				
Description: Test the Home module working or not				
Pre-condition: User have to be registered on the Site				
Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)

1. Go to the website 2. Login with Id and password 3. click on the 3 dot option 4. Click on Home		Water,Electricity,E-Service,Gas,Internet	As Expected	Pass
Post condition:				

Project Name: EK PAY			Test Designed by: Arifuzzman	
Test Case ID: FR_9			Test Designed date:20-8-22	
Test Priority :(Low, Medium, High): Medium			Test Executed by: Arifuzzman	
Module Name: My Profile			Test Execution date:20-8-22	
Test Title: Verify the My Profile interface				
Description: Test the My Profile module working or not				
Pre-condition: User have to be registered on the site				
Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
1. Go to the website 2. Give user id and password 3. Click on the 3 dot option 4. Click on my profile	Name Phone Num Email Address National ID	If any changes made it will updated	As expected	Pass
Post condition:				

Project Name: EK PAY			Test Designed by: Arifuzzman	
Test Case ID: FR_10			Test Designed date:21-8-22	
Test Priority :(Low, Medium, High): Medium			Test Executed by: Arifuzzman	
Module Name: Payment History			Test Execution date:21-8-22	
Test Title: Verify the Payment History interface				
Description: Test the My Payment History module working or not				
Pre-condition: User have to be registered on the site				
Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
1. Go to the website 2. Give user id and password 3. Click on the 3 dot option 4. Click on Payment History	Fetch Bill history	All the previous payment will be shown	As expected	Pass
Post condition:				

Project Name: EK PAY			Test Designed by: Arifuzzman	
Test Case ID: FR_11			Test Designed date:21-8-22	
Test Priority :(Low, Medium, High): LOW			Test Executed by: Arifuzzman	
Module Name: FAQ			Test Execution date:21-8-22	
Test Title: Verify the FAQ interface				
Description: Test the FAQ module working or not				
Pre-condition: User have to be registered on the site				
Test Steps	Test	Expected Result	Actual	Status (Pass/Fail)

	Data		Result	
1. Go to the website 2. Give user id and password 3. Click on the 3 dot option 4. Click on FAQ		Some common Question and their answer will be shown	As expected	Pass
Post condition:				

Project Name: EK PAY			Test Designed by: Arifuzzman	
Test Case ID: FR_12			Test Designed date:22-8-22	
Test Priority :(Low, Medium, High): Low			Test Executed by: Arifuzzman	
Module Name: About us			Test Execution date:22-8-22	
Test Title: Verify the About us interface				
Description: Test the About us module working or not				
Pre-condition: User have to be registered on the site				
Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
1. Go to the website 2. Give user id and password 3. Click on the 3 dot option 4. Click on About us		A small Company Summery and their review will be there .	As expected	Pass
Post condition:				

Project Name: EK PAY		Test Designed by: Arifuzzman
Test Case ID: FR_13		Test Designed date:23-8-22
Test Priority :(Low, Medium, High): High		Test Executed by: Arifuzzman

Module Name: Page Translate			Test Execution date:23-8-22	
Test Title: Verify the Language translate Process				
Description: Test the Language translate Process working or not				
Pre-condition: User have to go the website				
Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
1. Go to the website 2. Click on the BAN on the upper right	BAN To ENG ENG To BAN	Language will be change From English to Bangla	As expected	Pass
Post condition:				

8. ITEM PASS/FAIL CRITERIA

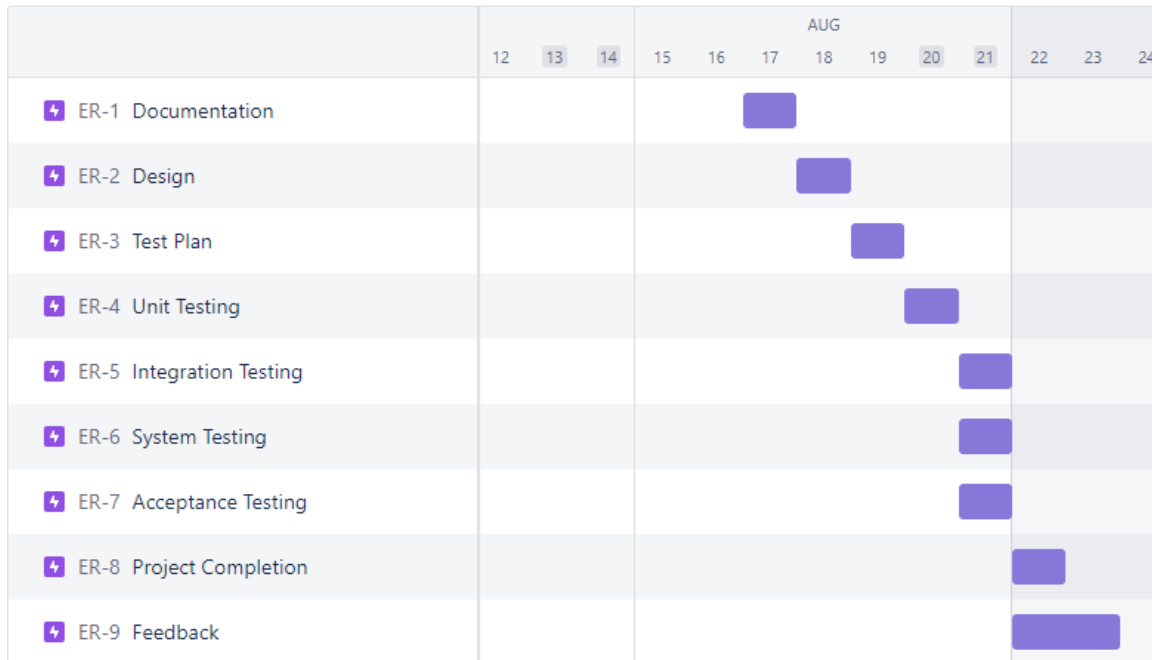
- When the user do the registration information might be valid.
- Mobile number might be valid
- Must provide the OTP send to phone number otherwise registration will be fail
- User id must be in numbers
- Page transaction and overall system experience should be smooth.
- Test case should be documented properly
- All they should be maintained and updated
- As we know complete testing is not possible for any software but at least 90% test cases should be passed only then the software will be accepted.

9. TEST DELIVERABLES

- Test plan
- Test case
- Test Design
- Test documentation
- Test data
- Test summery report
- Bug report
- Test script

10. TESTING SCHEDULE

The project plan includes the testing tasks listed below. The specific dates and durations for each work are specified in the project plan timetable. The individual required for each procedure is also indicated in the project schedule and plan to be evaluated.



11. PLANNING RISKS AND CONTINGENCIES

There could be multiple risk and contingencies during project time

- ❖ If the no of defect and bugs greater than tester team prediction it may need more time to fixed them and project budget may increase.
- ❖ If any of the team member resign for the job in the middle of the project it may takes few days more to complete the task.
- ❖ If end user is not satisfied with performance then delivery time might delay to fixes those problem.

12. APPROVALS

As we know completing testing is not possible for any software. But we try to test the software many input as we can. So based on our testing we can say our software is acceptable based on the end user review.

- DEVELOPMENT MANAGER - PASS
- TEST MANAGER - PASS
- TESTING MANAGER - PASS
- END USER - PASS