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Department of Computer Science
Faculty of Science & Technology (FST)

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Software Quality Assurance and Testing

SMS Gateway System

Under the supervision of

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Associate Professor

Software Test Plan

for

SMS Gateway System

Version 1.0 approved

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Revision History

Revision	Date	Updated by	Update Comments
01.	12.12.2021	Tarek, Ramisa	First Draft
02.	12.15.2021	Simran, Muntasir	Second Draft

1. TEST PLAN IDENTIFIER: [RS-MTP01.3](#)

2. REFERENCES

- None

3. INTRODUCTION

Background to the Problem

SMS gateway system is something that marketers using SMS in their marketing strategy. To operate SMS gateway system, a computer is needed that can send or receive text messages in the form of Short Message Service (SMS) or Multimedia Messaging Service (MMS) transmissions between local or international telecommunications networks via an SMS gateway or MMS gateway. In most circumstances, SMS and MMS are sent through a wireless carrier to a mobile phone. In our system it has been operate with device-to-person or application-to-person. The interactions are typically handled through SMS gateways. Content and media conversions are supported by many SMS gateways. There are so many companies like clothing brands, mobile companies, sim card companies and many more who sends messages to their customers with SMS gateway system to let them know about different types of important information and sometime in promotional purpose also.

Solution to the Problem

When it is the purpose of developing a system then there is always a goal of this related to some solution of any kind of problem, safety, security and so on. Developing SMS gateway system has also some motives and goals like speed, cost-effectiveness, reliability, universal platform, integration. Speed is something that works on a SMS gateway system is, 90% of SMS messages are read within the first three minutes of receiving them. This ensures that your messages are received when they are needed. In today's competitive marketing landscape, advertising and other types of customer contact can be quite costly. The cost effectiveness defines that companies can send SMS messages for a few cents using an online SMS provider. As SMS is the most reliable media to communicate so it provides reliability as well. There are currently 5.1 billion mobile users across the world, with penetration at an all-time high and that's how it becomes the universal platform as well. The system has the integration because this enables companies to integrate SMS into their existing CRM tools and infrastructure.

4. REQUIREMENT SPECIFICATION

4.1 System Features

Priority Level: High

Precondition: user have to have valid email and password

1. System Login

1.1 The software shall allow users to login with their given email and password

1.2 If the user doesn't have any existing account to login, the system should provide the registration facilities for new account with valid email id, name and password.

1.3 If the email id or password has been inserted wrong, then system should give the notice of it

Priority Level: High

Precondition: user should provide valid email and password

2. System registration

2.1 Any company, developing group or particular person can register into the system at any time.

2.2 The registering authorities should give at least minimum information for registering into the account.

2.3 The registering group should able to register only through email and password

2.4 The registering company should able to complete their profile later on

Priority Level: Medium

Precondition: the user has to be login with a valid email and password

3. Create Group

3.1 All the valid users should see the dashboard and the elements of it properly.

3.2 The users should able to create groups with some particular information

Priority Level: Medium

Precondition: the user has to be login with a valid email and password

4. Create Contact

4.1 All the valid users should see the dashboard and the elements of it properly.

4.2 The users should able to create Contact selecting group ID

4.3 The users should use valid Mobile Number

Priority Level: High

Precondition: the users should have sufficient balance into their account

5. Sending SMS

5.1 The users should have sent the message in groups.

5.2 The users should have the capability fill up all the boxes with necessary information.

5.3 The users should have the freedom to send messages to any operator numbers but they have to send the message from a fixed number.

5.4 If there is no sufficient balance while sending the message, the system should notify the user about that.

4.2 System Quality Attributes

- **Reliability:** Users should be free to make changes to the template as they see necessary. Under the system conditions, the system should work correctly at that moment.
- **Availability:** This system will be a web application that will be available at all times and can be visited.
- **Usability:** The application's user interface will be as simple as possible, allowing people to use it.
- **Performance:** In order to design this software, we consider all possible constraints so that user will get a smooth experience
- **Extensibility:** The application's internal structure will be so simple that any additional features can be introduced in the future without affecting
- **Security:** Because all data will be shared between to the customer from the companies, there will be personal information of the customers and different types of business

strategies of the companies so confidentiality it will be a top priority for us. Users should be able to conduct security work without difficulty.

4.3 System Interface

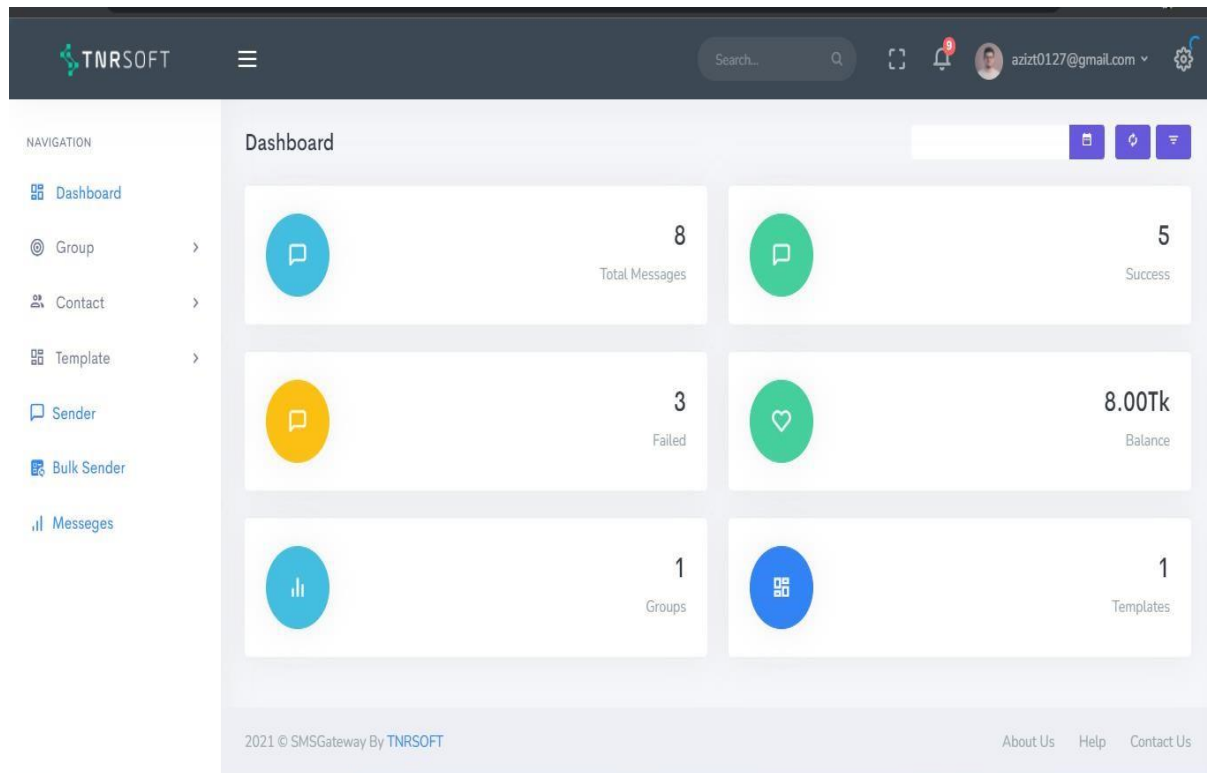


Fig: System Interface of SMS Gateway System

Project link: <https://tnrsms.xyz/>

4.4 Project Requirements

4.4.1 Project Estimation

In this project Constructive Cost Model will be used for calculation estimation. Our system is completely using software no hardware required.so,

Coefficient: 2.4

Project complexity P: 1.05

SLOC dependent coefficient T: 0.38

Source line of code (guessed) SLOC:5000

Effort Estimation Formulas:

Effort = PM = Coefficient * (SLOC/1000) ^P

Development Time = DM = 2.50 * (PM) ^T

Required number of people = ST = PM/DM

Using these formulas, we get,

Effort = PM = $2.4 * (5000/1000)^{1.05} = 13.005$ = 13 person-days needed for the project (labor working hours)

Development Time = DM = $2.50 * (13)^{0.38} = 6.62$ Weeks (week-days)

Required number of people = ST = $13 / 6.62 = 1.96 = 2$

Cost:

Labor cost: $2 * 25000 = 50000$ Taka (Approximately)

Service cost: $15000 = 15000$ Taka

Total: 65000 Taka (Approximately) or \$820 (Approximately)

5. FEATURES NOT TO BE TESTED

The template creating feature because the users who will use the system, they can use a template by their own choice.

6. TESTING APPROACH

6.1 Testing Levels

- The SMS Gateway System will use the Unit, System/Integration (combined), and Acceptance test levels. At least two full-time independent test persons are expected to be available for system/integration testing. However, due to budgetary and time restrictions, the majority of testing will be performed by the test manager with assistance from the development teams.
- UNIT testing will be done by the developers, in which the development group's will authorize. The software engineer should give verification of unit testing to the group head before unit testing is acknowledged and provided to the test individual. The test subject will be given access to all unit test data.
- Framework/INTEGRATION The testing will be overseen by the test director and the improvement group's pioneer, with support from individual engineers as needed. For this project, there are no specialized test devices available. Projects will be sent to the System/Integration test after all basic defects have been resolved. Up to two major abnormalities are permissible in a program as long as they do not prohibit it from being tested.
- Acknowledgment Genuine end-clients will conduct the testing with the help of the test chief and the development group pioneer. For a period of one month after the event. Following the completion of the System/Integration test, the acknowledgment test will be performed according to the current manual measure.

6.2 Test Tools

The test tools to be used are the and Selenium and Instagantt.

- For other types of testing (Unit testing, integration testing, and acceptance testing) selenium will be the best option. Selenium has many good features that allow it to make full use cases of the software functions.
- We have used Instagantt for making “Testing Schedule”. Instagantt is a Gantt charting software that works as an Asana integration app or as a standalone application. Users are able to create Gantt charts for their project and team plans. It has several views to show tasks, projects and due dates including a calendar and Timeline view.

6.3 Meetings

The test group will meet on the dot once a month to review progress and identify error trends and concerns as soon as practicable given the circumstances. With the sequence of events, the leader of the test group and the project manager will meet like clockwork. Over the course of several weeks, these two gatherings will take place. Extra gatherings can be called if needed in the event of a disaster.

7. TEST CASES/TEST ITEMS

Project Name: SMS Gateway		Test Designed by: MD Tarek Aziz		
Test Case ID: FR_1		Test Designed date:14.12.2021		
Test Priority (Low, Medium, High): High		Test Executed by: MD Tarek Aziz		
Module Name: Registration		Test Execution date:14.12.2021		
Test Title: verify Registration with valid Email and password				
Description: Test website Registration page				
Precondition (If any): User must have valid Email and password .Password should be equal or greater than 6 digits or letters.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website	Email: azizt0127@gmail.com Password: 123456 Re-Password: 123456	User must able to successfully register in application	As expected,	Pass
2. Enter email				
3. Enter password				
4. Re-enter password				
5. Click submit				
Post Condition: User successfully create account into system and able login through registered email and password				

Project Name: SMS Gateway		Test Designed by: MD Tarek Aziz		
Test Case ID: FR_2		Test Designed date: 14.12.2021		
Test Priority (Low, Medium, High): High		Test Executed by: MD Tarek Aziz		
Module Name: Login Session		Test Execution date:14.12.2021		
Test Title: verify login with valid username and password				
Description: Test website login page				
Precondition (If any): User must have valid username and password				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website	Email:	User should	As expected,	Pass
2. Enter username	azizt0127@gmail.com	Login into the		
3. Enter password	Password: 123456	application		
4. Click submit				
Post Condition: User is validated with database and successfully login to account. The account session details are logged in the database.				

Project Name: SMS Gateway		Test Designed by: MD Tarek Aziz		
Test Case ID: FR_3		Test Designed date:14.12.2021		
Test Priority (Low, Medium, High): Medium		Test Executed by: MD Tarek Aziz		
Module Name: Create Group		Test Execution date:14.12.2021		
Test Title: verify Group creation with valid information				
Description: Test website Dashboard page				
Precondition (If any): User must login with valid Email and password.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website	G_ID: 1	User must able to successfully create group in application	As expected,	Pass
2. Give Group ID	G_Name : Test			
3. Write the Group name				
4. Click Create				
Post Condition: User successfully create group in his/her account into system and able use to create Contact				

Project Name: SMS Gateway		Test Designed by: MD Tarek Aziz		
Test Case ID: FR_4		Test Designed date:14.12.2021		
Test Priority (Low, Medium, High): Medium		Test Executed by: MD Tarek Aziz		
Module Name: Create Contact		Test Execution date:14.12.2021		
Test Title: verify Contact creation with valid information				
Description: Test website Dashboard page				
Precondition (If any): User must login with valid Email and password.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1.Go to the website	G_ID: 1	User must able to successfully create Contact in application	As expected,	Pass
2.Give Group ID	Mobile: 01609439416			
3.Write the valid number				
4.Click Create				
Post Condition: User successfully create Contact in his/her account into system and able use to create Contact				

Project Name: SMS Gateway		Test Designed by: MD Tarek Aziz		
Test Case ID: FR_5		Test Designed date:14.12.2021		
Test Priority (Low, Medium, High): High		Test Executed by: MD Tarek Aziz		
Module Name: SMS sending		Test Execution date:14.12.2021		
Test Title: verify SMS sending Through System				
Description: Test website Dashboard page				
Precondition (If any): User must login with valid Email and password. And User have sufficient amount of Balance				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1.Go to the website	Sender_Num:	User must able to successfully send Message in application	As expected,	Pass
2.Select Sender Number	01782418899			
3.Write Receiver Number	Receiver_Num:			
4.Write message in SMS body	01609439416			
5. Click Send	SMS:Test			
Post Condition: User successfully Send SMS Via System and able use to template for sending SMS				

8. ITEM PASS/FAIL CRITERIA

Once the preliminary set of test cases has been constructed in Selenium Web Driver, the trying-out manner may be done. All of the test instances are built in the sort of manner that they need to be satisfied so as for the system to be completed. Because the software has not but been evolved the aforementioned standards for pass/fail.

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

It is preferred that there can be at any rate one full-time analyzer allocated to the mission for the framework/mix and acknowledgment checking out durations of the venture. This would require the mission of individual low maintenance closer to the beginning of the venture to take an interest in surveys and so forth and more or fewer months into the venture they could be appointed complete time. On the occasion that a one-of-a-kind test individual is not accessible, the challenge chief/check administrator will take delivery of this job. To deliver general and suitable testing the accompanying territories need to be tended to as far as preparing.

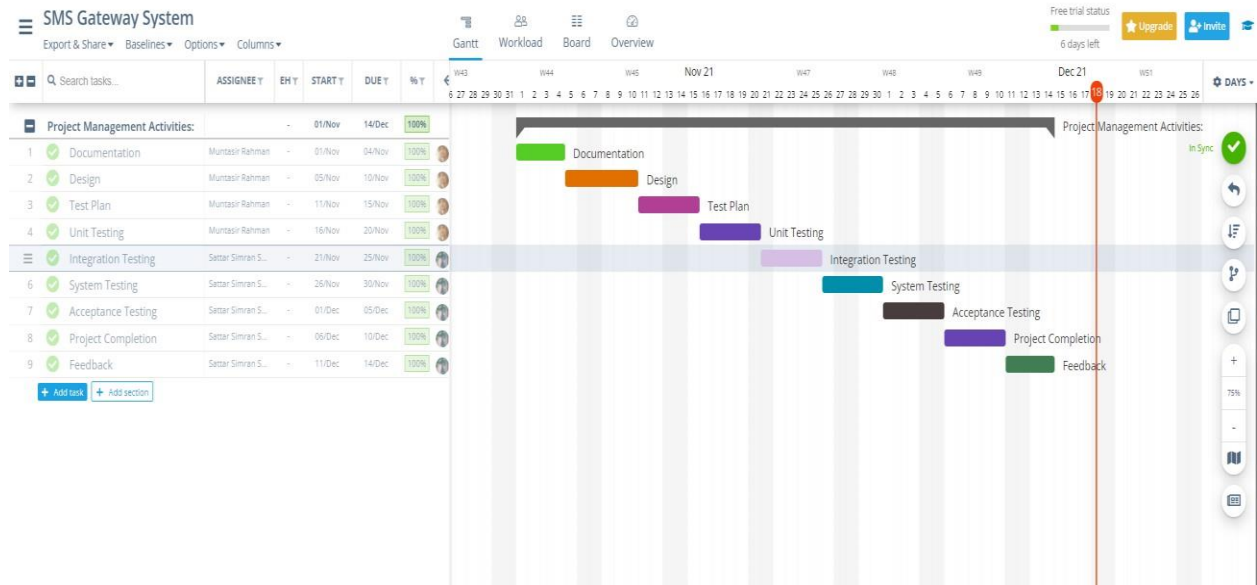
Again, the developers and tester will need to be trained on the basic operations of the selenium interface. Prior to final acceptance of the project, the operations staff will also require complete training on the selenium testing process.

11. RESPONSIBILITIES

Responsibilities	Development Team	Test team	Client
Acceptance test documentation & execution	X	X	X
System/integration test	X	X	
Unit test	X	X	
System design reviews	X	X	
Test procedures and rules	X	X	
Prototype review	X	X	X
Control change	X	X	X

12. TESTING SCHEDULE

Time has been allotted within the project plan for the following testing activities. The unique dates and instances for every activity are described within the project plan timeline. The persons required for every method are unique within the project timeline and plan as well. Coordination of the employees required for every task, test the crew, development crew, tester, and the client may be dealt with through the project manager/Development team leader.



13. PLANNING RISKS AND CONTINGENCIES

Points are given below-

- Lack of individual assets when testing is to start.
- The prerequisites might be changed or refreshed.
- Low staff and tension on explicit individual.

14. APROVALS

Approval	Personnel
Documentation	The development team then the client
System Layout	The development team then the client
Acceptance Testing	Tester
Integration and Unit Testing	Developer then tester
Test Procedures and Rules	Tester
Data Validation Results	The development team then the client
Overall Test Cases	Tester
Final Project Completion	The tester then the developer team

----The End----