SOFTWARE TEST PLAN

for

Travel Agency Company

Version 1.0 approved

Prepared by:
Venkata Sai Suvvari (20CS10067)
Atishay Jain (20CS30008)
Gandham Heamanth Rao (20CS10027)

IIT Kharagpur

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Revision History

Name	Date	Reason For Changes	Version
1	15/03/22	The entire SRS has been formulated	1.0
2	17/03/22	Updating the language to be used	1.1

1 Test Plan

1.1 Unique Identifier

TAAS

- Test Version: 1.0
- Year of creation: 2022

1.2 List of references

The following documents are referred to support the test plan of our software, TAAS:

1. Software Requirement Specifications Document (1.1)
2. Class Diagram (1.0)
3. Use Case Diagram (1.0)
4. Previous Year's assignments

2 Introduction

The purpose of this project is to build Travel Agency Automation Software, which is a data management system aimed at handling all the data of a car rental company. TAAS is a way to maintain all the data of a car rental company and storing the analysis

also. This helps in automation of listing of the cars present to give for renting, calculate the cost for renting, give statistic etc. The purpose of the plan is to maintain a steady stream of productive work from all entities involved in the project. This plan covers the entire testing of software project of TAAS. An in-depth test has been conducted for all functionaries described previously in the SRS. We perform the detailed testing of the stated functionality to help achieve the set business goals for your software product.

3 Test Items

The following items have been under rigorous testing to ensure complete usability.

The following test have all been done in a Python integrated development environment using Visual Studio Code.

- Create an account
- Login
- Book a car
- Paying Advance
- Seeing previous journeys
- Add/Buy a car
- Sending a car from repair
- Receiving a car after repairing
- Remove/Condemn a car
- Returning a car
- Showing cars/customers list
- Analysis
- Final Payment
- Feedback

4 Software Risk Issues

There are several parts of the project that are not within the control of the Travel Agency Software application but have direct impacts on the process and must be checked as well.

A. Backup and Recovery of local databases must be carefully checked.

B. Database security and access must be defined and verified.

C. The PC based software package installed at each distributor's location (both custom written and vendor supplied) will be providing the formatting of the distributors data into the correct formats.

D. The login details of the users and also the staff members and the database of the company must be stored carefully.

E. The ability to restart the booking process in the middle of the booking as it plays an important role in the booking process and data must also be deleted according to it.

F. The data between the staff and the user must be shared by defining properly and stored in the database accordingly.

5 Testing Features

5.1 Features to be Tested:

- **Login:** It should ask the user to create a new account if the account is previously not there. And it should take the user to his profile only when the credentials are correct.
- **Book a car:** The number of cars available will be lowered by one for each booking and if the no more car is available, then the same is mentioned.
- **Add Car:** Database should be changed when a car is added by admin.
- **Send car for repair:** Database should be changed when a car is sent for repair and the status of car has to be changed to unavailable.
- **Remove Car:** The car will be removed from the database and won't be seen in the display for customer.

- **Returning Car** The database will be changed and the status of the car will again be set to available.
- **Analysis:** The statistics of car model will be shown based on the data stored in the database.
- **Final payment:** The revenue earned on car will be changed, petrol consumed and other information such as maintenance cost for statistics purpose will be changed.
- **Feedback:** After the customer gives the feedback, the administrator should be able to see that feedback and it will be stored in the database.

5.2 Features not to be Tested:

- **Forgot Password** The software won't be helpful in case of forgotten password. The user has to write a mail to the company.
- **Return of a car :** It will be assumed that a customer will always return the car he rented.

6 Approach

1. UNIT Testing is done at the source or code level with language specific errors. It will be done by the Project Team and will be approved by Mentor and Professors. Proof of unit testing (test case list, sample output, data printouts, order information) must be provided by the Project Team to the Mentor and Professors before unit testing will be accepted and passed. All unit test information will also be provided.
2. SYSTEM/INTEGRATION Testing is for detecting the run time faults that can only be found out by testing it as a user not as developer. It will be performed by the Project team members with assistance from the mentors as required. No specific test tools are available for this project. Programs will enter into System/Integration test after all critical defects have been corrected.
3. ACCEPTANCE Testing is done to check system's compatibility with our software. It will be performed by the actual end users with the assistance of the test.

6.1 Measures and Metrics:

The following information will be collected by the project team during the Unit testing process.

- Defects by module and severity level.
- Defect Origin (Requirement, Design, Code)
- Time spent on defect resolution by defect, for Critical and Major only.
- Defects located at higher levels that should have been caught at lower levels of testing.
- Software Reliability Engineering(SRE) is to be used.

7 Item Pass/Fail Criteria

The test process will be completed once the team members have got satisfactory results from the software and the mentor has also approved the test cases. The pass or fail criteria will be checked on the basis of the statistics received from the customer use and verify with the original ones and check whether the data we got after checking is correct or not. From this we will also see whether we have to change any algorithm for better display of the statistics. We will also check the user side experience and find bugs if present and change accordingly for the best user experience.

8 Test Deliverables

- Acceptance test plan
- System/Integration test plan
- Unit test plans
- Report mock-ups
- Test logs and turnover reports

9 Suspension Criteria and Resumption Requirements

1. **No Administrators/customers are ready for testing at pilot initiation**
   The pilot project will be delayed until at least three car rental company owners are ready to initiate the pilot process. If the customers are not willing to rent a car online. No additional elements will be added to the TAAS project during this delay.

2. **Forgotten Credentials**
   If the admin forgot its password/username, then he won't be able to see the previous sale records, then he/she won't be able to analyse the sales. The testing cannot be carried out further then.

3. **Database corruption**
   If the database is corrupted somehow and the previous information is lost, then the admin won't be able to analyse the sale properly and the purpose goes off. The portion of the sales data lost may lead to misleading conclusion.

4. **Hardware or Software unavailability**
   If the specified software or hardware is not available for testing a particular feature, then the testing can't progress furthur.

5. **Wrong testing technique**
   If the admin of a company didn't understand the correct procedure of the testing process. He/she may be using it wrongly and not getting the correct results.

6. This will also add time to the lower levels of testing as full complete testing cannot be done without reasonable amounts of data. The data can only be derived from actual usage of the TAAS website.

10 Environmental Needs:

The following elements are required to support the overall testing effort at all levels within the Travel agency project:

A. The reference to TAAS software.

B. Access to the nightly backup/recovery process.

C. Access to the master control tables (data bases) for controlling the production/testing environment on both production and development systems.

D. OS with browser and active internet connection.

11 Training Needs:

It is preferred that there will be at least one (1) full time tester assigned to the project for the system/integration and acceptance testing phases of the project. This will require assignment of a person part time at the beginning of the project to participate in reviews etc... and approximately a weeks into the project they would be assigned full time. If a separate test person is not available the project manager/test manager will assume this role.
In order to provide complete and proper testing the following areas need to be addressed in terms of training.

- The developers and tester(s) will need to be trained on the basic operations of the interface.
- Prior to final acceptance of the project the operations staff will also require complete training on the TAAS working process.
- The administration staff will require training on the new reports.
- At least one developer and operations staff member needs to be trained on the control of the web based distributions.

12 Responsibilities

12.1 Team Role Description

Every member worked together for all jobs. But the specific work distribution is as follows:

- Venkata Sai Suvvari
  - Created the SRS document.
  - Created the back-end of the website.
- Atishay Jain
  - Created the Test Plan document.
  - Created the front-end of the website.
- Gandham Heamanth Rao
  - Created the Test Suite document.
  - Handled the data base.

13 Schedule

13.1 Tentative Timeline

Appropriate time has been allotted to each activity while formulating this project. We are planning to finalise all of our functions as mentioned above and test them appropriately.
The project would be completed well before the final presentation, as a part of our project evaluation.

A. Review of the System design document by test team personnel. This will provide the team with a clearer understanding of the application structure and will further define the Inventory classes, sub-classes and objectives.

B. Review of Requirements document by test team personnel (with other team members) and initial creation of Inventory classes, sub-classes and objectives.

C. Development of Master test plan by test manager and test with time allocated for at least two reviews of the plan.

D. Development of System/Integration and Acceptance test plans.

E. Unit test time within the development process.

F. Time allocated for both System/Integration and Acceptance test processes.

14 Approvals

Course Professor	Prof. Abir Das
Teaching Assistant	Mr. Owais Iqbal

15 Glossary

Some abbreviations used are:

- TAAS - Travel Agency Automation software
- OS - Operating System
- SRE - Software Reliability Engineering