ASIA PACIFIC COLLEGE

School of Computer Science and Information Technology

Journeys & More Global Tours and Consultancy Co.

Test Plan

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Background

Journeys & More Global Tours and Consultancy Co. (JMGTCC) Travel Arrangement and Appointment System Test Plan provides the overall plan on how the system testing should be done. This document will explain the detailed testing phases and other procedures to ensure that the system is fit for its purpose in giving efficiency and convenience to JMGTCC staff and clients.

Introduction

JMGTCC Booking and Reservation System Test Plan Objectives:

- To ensure data integrity and system security
- To eliminate system errors
- To ensure that the system reach its target purpose

JMGTCC Booking and Reservation System was initially developed in Wordpress and has been migrated and revised in Yii 2.0 Framework using PHP Programming Language. The system database design and data procedure has also been revised to incorporate new system modules and features.

Use Case Requirements:

- Travel Arrangement Request / Inquiry Management
- Visa Consultation Appointment Management
- Online Support Management

Testing Strategy

The Testing Strategy will be divided into two (2) parts:

Static Testing

This testing strategy or method is done during the development iterations. This is done by conducting tests and validations on the earlier stages of the development. The purpose of this is to find bugs and errors as early as possible to avoid complications on future stages of the software life cycle.

Dynamic Testing

The main objective of this strategy or method is to find bugs and errors during the software execution. This is done hands-on while the code is being executed. The purpose of this is to make sure that the system is running, that it behaves based on the system requirements and specifications.

Data and Database Integrity Testing

Test Objective:	To ensure Database access methods, procedures and processes function properly without data corruption
Technique:	- Execute database queries, methods and processes - Insert valid and invalid data - Inspect the database; check if all database events occurred properly, the data saved are populated accordingly, and if the data retrieved are correct
Completion Criteria:	All database access methods, procedures and processes function as designed and without any data corruption
Special Considerations:	- The testing may require the system to be running to invoke database processes from the system - The testing may also require to be manually conducted in localhost database server - There can only be limited number of records to be saved

Functional Testing

Test Objective:	To ensure proper system functionalities; this includes navigation, data entry, processing and retrieval
Technique:	- Execute processes based on use case data flow procedures using valid and invalid data Execute each use case, data flow or function, using valid and invalid data to verify the following: - The expected results occur when valid data is used - The appropriate error / warning messages are displayed when invalid data is used - Each business rule is properly applied
Completion Criteria:	- The expected results occur when valid data is used - Appropriate Error or warning messages are displayed when invalid data is used
Special Considerations:	

Assumptions

Change Requests

Modules developed by each team developer will be uploaded to the application repository and will be initially checked by the team lead developer. Change logs will automatically be recorded through the repository logs. Once the testing begins, there should be no changes made to these modules or to the entire system, yet minimum or functional changes can be made if required.

Personnel Dependencies

- **Static Testing**
  The project documentation and wiki site will be checked by the QA teams.

- **Dynamic Testing**
  Each module is required to be tested, checked and validated by the QA teams.

For the user acceptance testing, the users (JMGTCC personnel) are required to test the system and its performance and features. Approval should also be made to each module for an organized change requests if possible.

Software Dependencies

- The source code must be tested and validated
- The database, server and hosting procedure must be secured
- The development framework must be updated and in the latest version

Hardware Dependencies

- The devices (desktop, laptop) used in development must be working properly
- The devices must have enough connectivity to the server for initial hosting

Test Data & Database

- The test data should be distributed to testing personnel during the testing procedure
- The database should also be available for viewing, encoding and deleting test records

Test Items

The items to be tested are the following as implemented in Software Revision 2.0 of JMGTCC Travel Arrangement and Appointment System:

- **Visa Consultation Appointment (Visa Assistance)**

  Data Requirements : User credentials, Appointment date and time

  Function : The user can reserve a slot and schedules an appointment that will notify the travel agent for a new appointment schedule

- **Travel Arrangement Request**

  Data Requirements : Travel type, Place of Origin, Destination, Date and Time, Number of passengers, other travel packages and requests

  Function : The user can choose from the list of travel packages offered by the agency or request for a new travel package-combination or arrangement

- **Customer Service / Technical Support**

Data Requirements	:	User Credentials, User concern
Function	:	Online chat support feature that enables the direct / instant messaging

Features to be tested

The following are the features (functions or requirements) which will be tested. They represent the services available in the Travel Arrangement and Appointment System:

- **User Login**

  Risk Identification: *High*
  This feature serves as the first step in using the system. Username and password must be validated and system processes must be accessible according to user roles.

- **System Components / Modules**

  Risk Identification: *High*
  Every component must be tested, revised and free of bugs. Any module or component that functions incorrectly may affect the entire system processes and procedures.

- **Data Input Validation**

  Risk Identification: *High*
  Data input must be validated before saving to the System Database. This ensures Data integrity or data consistency over the entire system life cycle.

- **Email Sending**

  Risk Identification: *High*
  This is one of the core main functions of the system. It can be tested through creating a Visa Consultation Appointment and/or creating Travel and Tour Arrangement.

Features not to be tested

The following are the features which will not be tested:

- **System Interface Design**

  Risk Identification: *Low*
  The User Interface (Design) will be based on the JMGTCC website template. The Booking and Reservation System will only follow the color theme and template used in the website.

- **Online Support**

  Risk Identification: *Mid*
  This is an extension from the framework. It is still under observation whether the team will pursue to add the feature and may not be available on the day of the dynamic testing schedule.

- **Generate Visa Consultation Appointment Report**

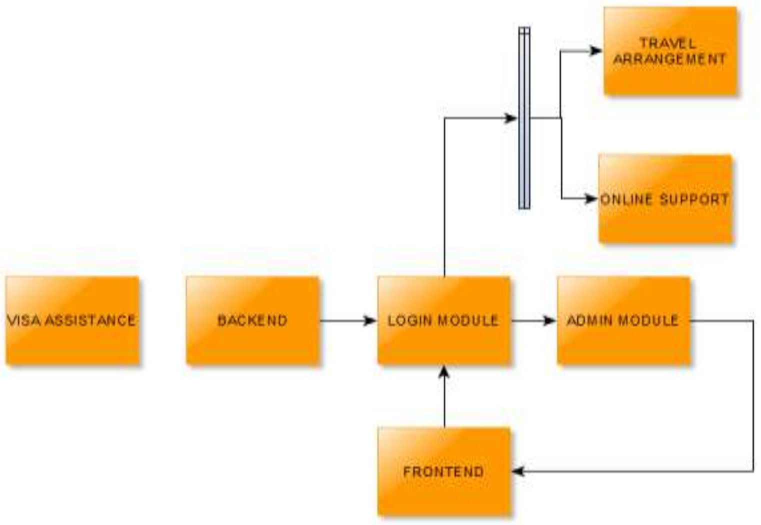
  Risk Identification: *Mid*
  This is still a work in progress feature and may not be available during the dynamic testing but will be added in the next release version.

- **Visa Consultation Appointment History**

  Risk Identification: *Mid*
  This is still a work in progress feature and may not be available during the dynamic testing but will be added in the next release version.

Approach

An end-to-end integration testing will be done to check whether the system works from start-to-finish and to determine data dependencies with regards to the system modules. The diagram below shows the flow of testing from the main modules:



As what is shown above, the Visa Consultation Appointment module is a floating module that can be tested even without the other modules. For scheduling, the following testing should be done:

- Accessing the Visa Consultation Appointment
- Viewing available dates
- Booking a date

The testing process starts with the backend. The admin will logon to the system and manage the admin module wherein the rest of the process is dependent upon. Here is a list of the functions of the admin module:

- CRUD of Freebies
- CRUD of Food Deals
- CRUD of Airlines
- CRUD of Time
- CRUD of Tour Type
- CRUD of Transport Service
- Visa Consultation Appointment

- Travel Arrangement

From the admin, the frontend can now work simultaneously with the backend and registered users can now use the travel arrangement and online support feature.

Item Pass / Fail Criteria

Login Module

Backend:

- System only accepts authorized users (Employees)
- Only the admin is able to create authorized users.

For both:

- Password encryption and strength
- 15 minutes session timeout
- No duplicate usernames
- Data input validation

Frontend:

- Guests can create their account
- Logging in to the application

Visa Consultation Appointment

Backend:

- Viewing the detailed record of the schedules
- Approving of schedules
- Display monthly earnings

Frontend:

- Book a date

For both:

- View remaining unscheduled dates
- Data input validation

Travel Arrangement

Backend:

- Managing hotels
- Managing airlines
- Managing tour deals
- Verification of travel arrangements

Frontend:

- Create an arrangement

For both:

- View tour deals
- View arrangements
- Data input validation

<u>Online Support</u>

Backend:

- Answer questions through chat

Frontend:

- See if support personnel is online
- Inquire through chat

Suspension / Resumption Criteria

Testing checkpoints

1. Application is accessible in web and mobile.
2. Users can successfully login (Backend/Frontend).
3. Registered users can manage their travel arrangements. (Create, Update, View).
4. Users can schedule their visa appointment.
5. Manageability of the system. (Backend Perspective).
6. Backend users can monitor their client’s arrangements and schedules.
7. Live chat works for both the backend and frontend.

Suspension Criteria

- System testing should stop when:
- There are errors on the backend side of creating or inserting of data.
- Multiple critical errors are found from the starting point or the backend side
- Half of the requirements are not fulfilled.

Resumption Criteria

System testing should resume when:

- Found errors are fixed.
- There is enough functions or modules to test

Test Deliverables

The following documents should be delivered:

- Test cases Documents
- Test Plan
- Test Scripts
- Test Data
- Test Results/reports
- Test summary report
- Defect Report
- Release notes

Testing Tasks

TASK	DESCRIPTION
Develop test cases	Detailed document of test cases.(Test case document)
Create dummy database for testing	Created database will be used for testing purposes only and will be destroyed afterwards.(Test Data)
Execute tests and evaluate defects	Execute test scripts and study found defects.(Test plan, test scripts)
Report defects	Document the found defects.(Defect Report)
Create test reports	Testing summary and reports. (Test Results and summary report)

Environmental Needs

Hardware Requirements

- PC/Laptop with internet connection
- Android Mobile Devices(For mobile testing)

Software Requirements

- Browsers that preferably supports HTML5 and CSS3 scripts.
  Please refer to this link for browser support →http://fmbip.com/litmus

- XAMPP (For local testing)
- PhpMyAdmin(For Local testing)

Responsibilities

Developer's Responsibilities

Tasks	Person(s) Responsible	Responsibilities
Test cases Documents	Erika Hidalgo	Lead the team and assigned which test cases are assigned to each member
Test Plan	Arianne Bianca Papna	Divide the parts of the test plan among the team members, then later on integrate and check it.
Test Scripts	Erika Hidalgo	Create test scripts for the program.
Test Data	Arianne Bianca Papna	Create test data, which would be used for testing acceptable values.
Test Results/reports	Roxanne Therese Luangco	Consolidate all the test results and reports, then summarize it.
Test summary report		
Defect Report	Arianne Bianca Papna	Write a report for any defect that will be found on the system.

Aside from these responsibilities, each member must also:

- Assure that all tasks assigned to them are finished on time
- Properly test the system, before project presentation
- Provide all the documentation needed for the testing phase of the project

Staffing and Training

The testers and quality assurance group are essential to make every project a success. Their responsibility to ensure that the system will pass through a series of test, is what makes a tester one of the most important contributors to the project. In order to achieve these, the testers must accomplish the following items:

- **Familiarization to Business Processes**

  The tester must be fully aware of how a business works and the processes involved in it. Without knowing these, the testers will have a hard time in understanding the procedures and how the system works.

- **Hands-on experience**

  Through this process, the testers can be more knowledgeable and skillful in terms of testing and quality assurance. This is one of the most important part of learning and training to every tester.

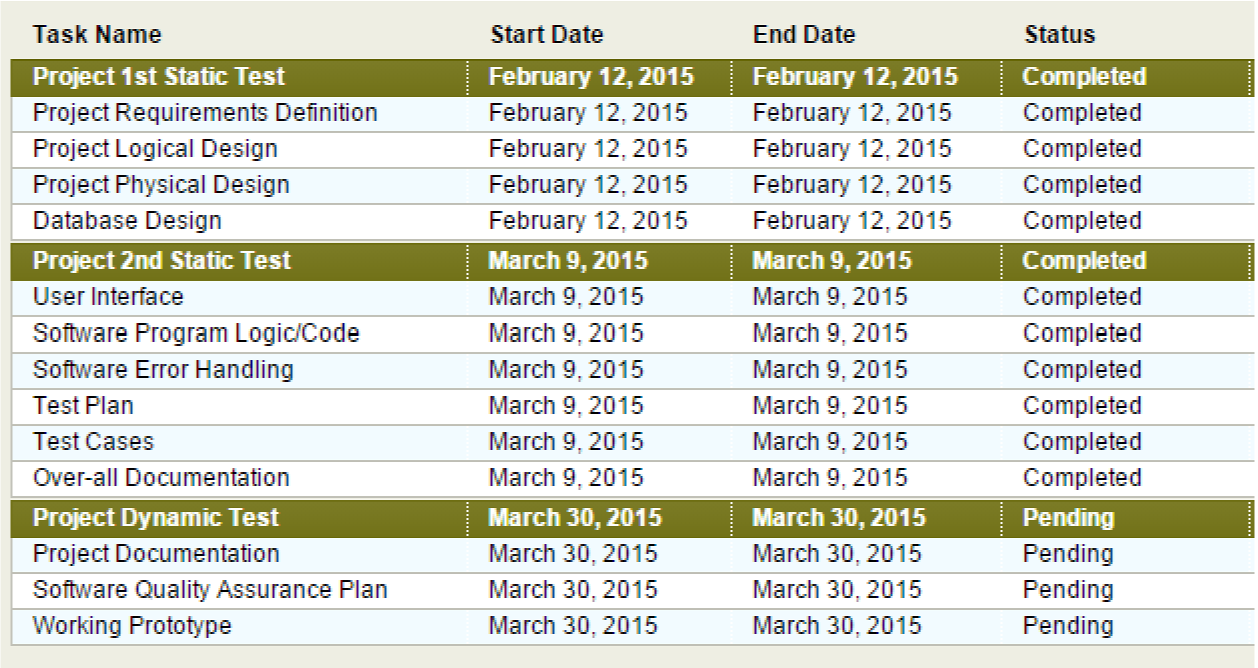
- **Testing Skills**

  A tester must have at least one (1) certification or any proof that shows the acquired skills of the tester.

- **Determination to learn**

  Since the technology keeps on changing, the tester must be responsible to keep up and learn more about the latest trend and the tools involved in it. Through these, the skill and knowledge of the tester can also be updated.

Schedule



Task Name	Start Date	End Date	Status
Project 1st Static Test	**February 12, 2015**	**February 12, 2015**	**Completed**
Project Requirements Definition	February 12, 2015	February 12, 2015	Completed
Project Logical Design	February 12, 2015	February 12, 2015	Completed
Project Physical Design	February 12, 2015	February 12, 2015	Completed
Database Design	February 12, 2015	February 12, 2015	Completed
Project 2nd Static Test	**March 9, 2015**	**March 9, 2015**	**Completed**
User Interface	March 9, 2015	March 9, 2015	Completed
Software Program Logic/Code	March 9, 2015	March 9, 2015	Completed
Software Error Handling	March 9, 2015	March 9, 2015	Completed
Test Plan	March 9, 2015	March 9, 2015	Completed
Test Cases	March 9, 2015	March 9, 2015	Completed
Over-all Documentation	March 9, 2015	March 9, 2015	Completed
Project Dynamic Test	**March 30, 2015**	**March 30, 2015**	**Pending**
Project Documentation	March 30, 2015	March 30, 2015	Pending
Software Quality Assurance Plan	March 30, 2015	March 30, 2015	Pending
Working Prototype	March 30, 2015	March 30, 2015	Pending

Resources

Listed below are the resources that were used in developing the Booking and Reservation system of JMGTCC.

Resources	**Link**
Official website of JMGTCC	http://journeysglobaltours.com/
Project documentation of JMGTCC	http://projects2.apc.edu.ph/wiki/index.php/
Project Repository	https://code.google.com/p/apc-softdev-it111-04 https://github.com/joegeneq/apc-softdev-it111-04
Yii Framework Guide	http://www.yiiframework.com/doc-2.0/guide-intro-yii.html

Risks and Contingencies

Risk Factor	Risk Statement	Impact	Contingency Plan
TECHNICAL RISK			
Incorrect or Inconsistent Data	This risk is due to human error. It can affect the data from the client which will be stored to the database of the system	Low	It can be avoided if the text fields, where the client must input the required data can be limited. If possible, there must be available options to choose from, so that the user can avoid entering incorrect data.
Inaccessible Pages or Functions	This type of risk must be prevented at all cost. The probable causes for this risk are: • Server or Database Malfunction • Algorithm or Programming Error • Low or No Network Connectivity	High	This can be prevented if the functionality of the system will be thoroughly checked and tested. The developers must make sure that the system pass through quality check.
MANAGEMENT RISK			
Lack of Personnel to Support Customer Service	This risk can be triggered by the sudden increase on the number of clients who needed more information about their company and the services that they offer.	Medium	This can be done be avoided by employing skilled individuals who can assist clients within a short amount of time or if there is a great increase on the number of clients, or if there is a great increase on the number of clients, they too must increase the number of their employees.
Unskilled or Untrained Personnel	This risk can affect the management of JMGTCC and the system as well.	Medium	This could be prevented if proper training will be implemented and highly qualified staff is hired.

Approvals

The undersigned acknowledge that they have reviewed the JMGTCC Test Plan document and agree with the approach it presents. Any changes to this Requirements Definition will be coordinated with and approved by the undersigned or their designated representatives.

Signature: Date:

Print Name:

Title:

Role:

Signature: Date:

Print Name:

Title:

Role:

Signature: Date:

Print Name:

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