Temasek Polytechnic

School of Informatics and IT

**Diploma in Information Technology (IT)**

Software Test Specifications (STS)

**Project Particulars**

|  |  |
| --- | --- |
| **Tutor** | Antonio Qi Yutao魚の頭 |
| **Class** | C17B05 |
| **Project Title** | Hotel Management System |

**Project Team’s Particulars**

|  |  |
| --- | --- |
| **Matric Number** | **Student Name** |
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| **1705022J** | **Viswanadham Udaya Chitanya Krishna** |

Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| <dd/mm/yy> | <x.x> | <details> | <name> |
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# **1. DISTRIBUTION OF WORKLOAD**

# 

*[Determine which members of the team will be responsible for which areas in the construction and testing process. Individual’s responsibilities should be clearly spelt out.]*

|  |  |
| --- | --- |
| **Construction & Testing** | **Members** |
| Locale Area Recommendation Module | Chang Won kit |
| Staff management Module | Tay Zhun Hang |
| Housekeeping Module | Udaya Krishna |
| Reporting Module | Chia Rui Feng |
| Github | Chang Won kit,  Tay Zhun Hang  Chia Rui Feng |
| User Homepage | Everyone but mostly won kit |

# 

# **2. MODULE DEVELOPMENT AND UNIT TESTING**

# **2.1 <Local Area Recommendation Module>**

The Local Area Recommendation Module has 4 pages meant for the general users, who will be mostly guests of the hotel. The first page allows them to choose whether they want to utilize the search function, by typing either yes or no in the text field provided, giving users a choice. If the user decides to use the function, they will be directed to the second page, if not they will be directed to the homepage of the website for users.

The second page is a form that allows the users to select their preferences in locations and specify search results. The various questions asked allows the system to choose a select few locations that suit the interest of the user. After selected the various questions, the user can submit the form and check on their results.

The third page displays the information, which makes use of Google Maps and a internal AI which shortlists the locations that fit the user’s needs and requirements specified on the second page. The user can click on a location that fits their liking and look at the details, which will be displayed on the fourth page.

The fourth page displays the details for the selected location, such as the location, average expenditure, transport, distance from hotel, and sightseeing locations. The user can make a judgement of the location and decide whether he wants to visit the location. He can then choose whether he wants to check another location or to finish the search and be directed to the user homepage of the hotel.

A simple methodology that I developed and to choose to follow, is to have different users try out the function that I have created. Whether it be the head project manager, another fellow employee that works in the marketing sector, or a simple clerk of the company. I ensure that all opinions from different backgrounds are taken into consideration to form a universal function that everyone will be able to use easily and manageably. This ensures simplicity of the software and ensures quality software development and testing.

**2.2 <Staff Management Module>**

The Staff Management Module has two different users that can access different informations.

The first user is the staffs of the hotel. The staffs can access the “Staff Main Menu” page on the software to check their daily duties. After they are done with one of the jobs, the checkbox will be marked to indicate that they have finished that particular work. Once they have finished the list of jobs, they can proceed to rest until their working shift is over.

The second user of this module will be the admins. The admins can check the “Staff Personal Information” page, the “Staff Attendance” page and the “Staff Duty” page. The “Staff Personal Information” page is mainly to keep track of the staff’s personal information such as their handphone number and their address. The “Staff Attendance” page is mainly to keep track of the staff’s attendance. It will only start recording after the staffs connect to the hotel wifi and logs in to the module. Once recorded, the admins can view the staff’s time of arrival and departure of the hotel. As for the “Staff Duty” page, it shows what the staff had to do during their working hours. By the end of the day, the duties that are checked by the staff on their software will be shown on this page. This will keep track of what they have done during their working hours.

The testing methodology I followed is to let my team and I test each and every functions of the software to check their functionality. This will ensure that there is no problem in the software and ensure quality software development and testing.

**2.3 <Housekeeping Module>**

The HouseKeeping Module mainly consists of a Homepage and 6 other pages for Housekeeping Staff Schedule Information. The Homepage is Designed on a purpose of providing customers privacy, and free time for our staff members. Basically customers will provide their free time or the time they go out, to our staff for HouseKeeping. So that the customers won’t get disturbed while our staff is cleaning. Most customers use this feature as they need some privacy and customize the timing according to their needs.

The other 6 pages contains of all the information needed for HouseKeeping Staff and Admins. It has “Staff Attendance and Duties” page consists of Information of Staff name their Attendance and the Duties (in Housekeeping) that they are Allocated.Their are Room Maintenance, Hotel Maintenance, Cooking Maintenance pages with Information of Staff name their Allocated Duty, Placements and Timings for their respective Roles. These Information is accessed by HouseKeeping Staff members, Admins and all the Staff member in other segments. It also contains Service Crew who has special roles as bell boy or cab booking person their placements and timings. Finally the Other service crew who are allocated only during the seasonal celebrations like New year or christmas where they need to arrange all the decorations and all. The Housekeeping module uses most of the Database due to its Schedule Information for all the HouseKeeping Staff.

**2.4 <Reporting Module>**

The reporting module is segmented and different levels of users allow different types of access. Normal staff is only able to view the first 3 reports being Room status, Guests in individual rooms and Guests in hotel. The other 2 being staff management and Room Occupancy Report is inaccessible to them.

Admin as well as management stuff is able to view the 3 reports previously mentioned as well as access Room Occupancy Report and staff management.

Before accessing the Reporting module page, user will have to first authenticate themselves to identify if they’re a admin with full access or a normal staff with normal access.

The reporting module is segmented into 5 different reports and for the first 3 parts of the report being Room status, Guest in individual rooms, and Guests in hotel. This part of the module is made up of mostly tables that is populated with data that is gathered from the system’s internal database and displayed. The data used to populate the tables will be based on database on customer and rooms.

The other part which is Room Occupancy Report. This part of the module includes a pie graph which illustrates the raw data for easy viewing, as well as raw data displayed in tables based on data gathered from other modules such as Local Area recommendation module that includes booking details in its module.

I believe that software aided testing does not fully sieve out all the bugs hidden in the code and therefore believe that the best way to ensure quality software development and testing, I have to do manual code review and read each and every line of code written by myself have my team members read my code as well.

Another method of testing was to test run the module itself and test it myself for any bugs unforseen from manual code review itself. After testing it myself, my teammates also run the module and test for bugs i’ve missed.

*[Describe the process of module development and unit testing. Wat have your team and individual developers done to ensure quality software development and testing? Are there any testing methodologies (either researched or self developed) that you follow?]*

**3 SYSTEM INTEGRATION**

# 

We first added the files onto Github initialliy for all to see and test.

After hearing the comments from our team about the different files, COMMITS were made to the files and therefore contributing to the commit.

Commiters: Zero716 - Tay Zhun Hang

Commiters: 1703879E - Chang Won Kit

Commiters : BorkerAlter - Chia Rui Feng

# 

# **4 TEST LOG**

## **4.1.1 <Users login to kiosk / Local Area Recommendation Module>**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | Users click on button to login |  | Users are directed to login page | Users are directed to login page |  |
| 2 | Users fill in details on text fields. | User credentials | Users fill in their credentials | Users fill in their credentials |  |
| 3 | Users press submit button | User Credentials | Users are directed to new page due to authorization access | Users are directed to new page due to authorization access |  |
| Alt flow 1 |  |  |  |  |  |
| 1 | Users are unable to login | User Credentials | Users are unable to login | Users are unable to login |  |
| 2 | Users press the assistance button |  | Staff are notified and head towards the kiosk | Staff are notified and head towards the kiosk |  |

## 

## **4.1.2 <Users use the Local Area Recommendation system / Local Area Recommendation Module>**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | Customer given choice to use function |  | Customer chooses the ‘Yes’ option and directed to function page | Customer chooses the ‘Yes’ option and directed to function page |  |
| 2 | Customer fills in ‘Preference’ textbox | Customer preferences | Customer enters preference details | Customer enters preference details |  |
| 3 | Customer selects radio button options | Customer preferences | Customer chooses the options that suits his preference | Customer chooses the options that suits his preference |  |
| 4 | Customer presses submit button |  | Customer is directed to the results page, data is sent to database for processing | Customer is directed to the results page, data is sent to database for processing |  |
| 5 | Customer selects location of preference |  | The location information is retrieved | The location information is retrieved |  |
| 6 | Customer selects user homepage to end service |  | Customer is directed to kiosk page | Customer is directed to kiosk page |  |
| Alt flow 1 |  |  |  |  |  |
| 1 | Customer selects ‘No’ option |  | Customer is directed to kiosk page | Customer is directed to kiosk page |  |
| Alt flow 2 |  |  |  |  |  |
| 1 | Not all information is either selected or input on customer preferences |  | Customer is prompted to complete filling in all details | Customer is prompted to complete filling in all details |  |
| Alt flow 3 |  |  |  |  |  |
| 1 | Customer selects ‘Recommend me another location’ |  | Another location is able to be selected by user | Another location is able to be selected by user |  |
| 2 | Continue from normal flow step 5 |  |  |  |  |

## 

## **4.1.3 <Users use the facilities function/ User Homepage menu>**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | User clicks on ‘facilities’ button |  | User directed to facilities page | User directed to facilities page |  |
| 2 | User returns to homepage |  | User is directed to homepage | User is directed to homepage |  |
|  |  |  |  |  |  |

## 

## **4.1.4 <Users use the housekeeping function/ User homepage menu>**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | User clicks on ‘Housekeeping’ button |  | User directed to housekeeping page | User directed to housekeeping page |  |
| 2 | Users enter their preference for housekeeping timing | User timing preferences | Users enter their preferences in the text boxes | Users enter their preferences in the text boxes |  |
| 3 | Users press save changes | User preferences | Data is sent to database | Data is sent to database |  |
| 4 | Users press ‘Return to homepage button’ |  | Users are directed to homepage | Users are directed to homepage |  |
| Alt Flow 1 |  |  |  |  |  |
| 1 | User did not fill in all text fields |  | System prompts user to fill in all fields | System prompts user to fill in all fields |  |
| Alt Flow 2 |  |  |  |  |  |
| 1 | User did not fill in appropriate range timing for housekeeping |  | System prompts user to fill in appropriate timing | System prompts user to fill in appropriate timing |  |

## 

## **4.2.1 <Housekeeping staff/Admin/Management wants to check Staff Attendance and Duties>**

## 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | User attempts to login before being able to access HouseKeeping module | User:  CorrectUser  Pass:  CorrectPass | Logged in | Logged in |  |
| 2 | User is logged in, now accessing  Staff Attendance and Duties page |  | Able to view Staff Attendance and Duties | Able to view Staff Attendance and Duties |  |
| Alt flow 1 | User enters incorrect credentails | User:  WrongUser  Pass:  WrongPass | Unable to access HouseKeeping Module | Unable to access HouseKeeping Module |  |

## 

## **4.2.2 <Housekeeping staff/Admin/Management wants to check Room Maintenance Information>**

## 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | User attempts to login before being able to access HouseKeeping Module | User:  CorrectUser  Pass:  CorrectPass | Logged in | Logged in |  |
| 2 | User is logged in, now accessing  Room Maintenance Information  page |  | Able to view Room Maintenance Information | Able to view Room Maintenance Information |  |
| Alt flow 1 | User enters incorrect credentails | User:  WrongUser  Pass:  WrongPass | Unable to access HouseKeeping Module | Unable to access HouseKeeping Module |  |

## 

## **4.2.3 <Housekeeping staff/Admin/Management wants to check Hotel Maintenance Information>**

## 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | User attempts to login before being able to access HouseKeeping Module | User:  CorrectUser  Pass:  CorrectPass | Logged in | Logged in |  |
| 2 | User is logged in, now accessing  Hotel Maintenance Information  page |  | Able to view Hotel  Maintenance Information | Able to view Hotel Maintenance Information |  |
| Alt flow 1 | User enters incorrect credentails | User:  WrongUser  Pass:  WrongPass | Unable to access HouseKeeping Module | Unable to access HouseKeeping Module |  |

## **4.2.4 <Housekeeping staff/Admin/Management wants to check Cooking Maintenance Information>**

## 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | User attempts to login before being able to access HouseKeeping Module | User:  CorrectUser  Pass:  CorrectPass | Logged in | Logged in |  |
| 2 | User is logged in, now accessing  Cooking Maintenance Information  page |  | Able to view Cooking Maintenance Information | Able to view Cooking Maintenance Information |  |
| Alt flow 1 | User enters incorrect credentails | User:  WrongUser  Pass:  WrongPass | Unable to access HouseKeeping Module | Unable to access HouseKeeping Module |  |

## 

## **4.2.5 <Housekeeping staff/Admin/Management wants to check Service Crew Information>**

## 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | User attempts to login before being able to access HouseKeeping Module | User:  CorrectUser  Pass:  CorrectPass | Logged in | Logged in |  |
| 2 | User is logged in, now accessing  Service Crew Information  page |  | Able to view Service Crew Information | Able to view Service  Crew Information |  |
| Alt flow 1 | User enters incorrect credentails | User:  WrongUser  Pass:  WrongPass | Unable to access HouseKeeping Module | Unable to access HouseKeeping Module |  |

## 

## **4.2.6 <Housekeeping staff/Admin/Management wants to check Other Service Duties>**

## 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | User attempts to login before being able to access HouseKeeping Module | User:  CorrectUser  Pass:  CorrectPass | Logged in | Logged in |  |
| 2 | User is logged in, now accessing  Other Service  Duties  page |  | Able to view Other Service  Duties | Able to view Other Service  Duties |  |
| Alt flow 1 | User enters incorrect credentails | User:  WrongUser  Pass:  WrongPass | Unable to access HouseKeeping Module | Unable to access HouseKeeping Module |  |

## 

## **4.3.1 <Staff members uses the software/ Staff Main Menu>**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | Staff logs in | Correct username and password entered | Logged in | Logged in |  |
| 2 | Staff checks the checkbox after finishing their work |  | Able to check the checkbox | Able to check the checkbox |  |
| Alt flow 1 |  |  |  |  |  |
| 1 | Staff logs in | Wrong username and password entered | Unable to log in | Unable to log in |  |

## **4.3.2 <Admin logs in and check staff information/ Function 2>**

## 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | Admin logs in | Correct username and password entered | Able to log in | Able to log in |  |
| 2 | Admin goes to the “Staff Personal Information” page |  | Able to view “Staff Personal Information” page | Able to view “Staff Personal Information” page |  |
| Alt flow 1 |  |  |  |  |  |
| 1 | Admin logs in | Wrong username and password entered | Unable to log in | Unable to log in |  |

## 

## **4.3.3 <Admin checks staff attendance / Staff Attendance>**

## 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | Admin goes to the “Staff Attendance” page |  | Able to view “Staff Attendance” page | Able to view “Staff Attendance” page |  |

## 

## **4.3.4 <Admin checks staff duties/ Staff Duty>**

## 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | Admin goes to the “Staff Duty” page |  | Able to view “Staff Duty” page | Able to view “Staff Duty” page |  |

## 

*…*

## **4.4.1 <Counter staff/Admin/Management wants to check room status / Check Room Status>**

## 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | User attempts to login before being able to access Reporting module | User:  CorrectUser  Pass:  CorrectPass | Logged in | Logged in |  |
| 2 | User is logged in, now accessing Room status page |  | Able to view room status page | Able to view room status page |  |
| Alt flow 1 | User enters incorrect credentails | User:  WrongUser  Pass:  WrongPass | Unable to access Reporting module | Unable to access reporting Module |  |

## **4.4.2 <Counter staff/Admin/Management wants to access a specific customer’s information / Check customer’s information>**

## 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | User attempts to login before being able to access Reporting module | User:  CorrectUser  Pass:  CorrectPass | Logged in | Logged in |  |
| 2 | User is logged in, now accessing Room status page |  | Able to view room status page | Able to view room status page |  |
| 3 | User clicks on Guests in All Rooms tab |  | User is directed to Guests in All Rooms tab | User is directed to Guests in All Rooms tab |  |
| 4 | User identifies specific customer’s name and clicks on details button |  | User is directed to Customer’s information page | User is directed to Customer’s information page |  |

## 

## **4.4.3 <Counter staff wants to access Room Occupancy Report / Room occupancy Report>**

## 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | User attempts to login before being able to access Reporting module | User:  CorrectUser  Pass:  CorrectPass | Logged in | Logged in |  |
| 2 | User is logged in, now accessing Room status page |  | Able to view room status page | Able to view room status page |  |
| 3 | User clicks on Room Occupancy Report tab |  | Unable to access Room Occupancy Report | Unable to access Room Occupancy Report |  |

## **4.4.4 <Admin/Management wants to access Room Occupancy Report / Room Occupancy Report>**

## 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | User attempts to login before being able to access Reporting module | User:  CorrectUser  Pass:  CorrectPass | Logged in | Logged in |  |
| 2 | User is logged in, now accessing Room status page |  | Able to view room status page | Able to view room status page |  |
| 3 | User clicks on Room Occupancy Report tab |  | Able to access Room Occupancy Report | Able to access Room Occupancy Report |  |

## 

## 

## 

## **4.4.5 <Admin/Management wants to see last month’s booking details / Room Occupancy Report>**

## 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/No** | **Steps** | **Test Data** | **Expected Results** | **Actual Results** | **Remarks** |
| 1 | User attempts to login before being able to access Reporting module | User:  CorrectUser  Pass:  CorrectPass | Logged in | Logged in |  |
| 2 | User is logged in, now accessing Room status page |  | Able to view room status page | Able to view room status page |  |
| 3 | User clicks on Room Occupancy Report tab |  | Able to access Room Occupancy Report | Able to access Room Occupancy Report |  |
| 4 | User clicks on drop down menu beside label:Rooms booked by |  | A list consisting of 12 different month is displayed | A list consisting of 12 different month is displayed |  |
| 5 | User selects last month in drop down menu |  | The table below the drop down menu changes accordingly to selected choice in dropdown | The table below the drop down menu changes accordingly to selected choice in dropdown |  |
| Alt Flow1 | User selects a month in advance |  | The table below will display rooms booked based on advanced bookings recorded in system | The table below will display rooms booked based on advanced bookings recorded in system |  |