**DUS Testing**

1．Testing Basic Content

1.1 Testing Main Point

Testing methods: manual test, automatic test, simulate actual users to make relevant testing

1.2 Testing Content

Function test, performance test(including load/pressure test), user interface test, compatibility tets, security test, form test, database test.

1.3 Testing Environment

|  |  |
| --- | --- |
| CPU | Intel Core i5 or Higher |
| Memory | 8G or Higher |
| System | Mac OS / Windows 10 |

1.4 Testing Timetable

10.5.2019-23.5.2019

2. Testing Specifications

2.1 Bug Classification

|  |  |  |
| --- | --- | --- |
| **Classification** | **Tag** | **Description** |
| Critical | S1 | The defect affects critical functionality or critical data. It does not have a work around. Example: Unsuccessful installation, complete failure of a feature. |
| Major | S2 | The defect affects major functionality or major data. It has a workaround but is not obvious and is difficult. Example: A feature is not functional from one module but the task is doable if 10 complicated indirect steps are followed in another module/s. |
| Minor | S3 | The defect affects minor functionality or non-critical data. It has an easy workaround. Example: A minor feature that is not functional in one module but the same task is easily doable from another module. |
| Trivial | S4 | The defect does not affect functionality or data. It does not even need a workaround. It does not impact productivity or efficiency. It is merely an inconvenience. Example: Petty layout discrepancies, spelling/grammatical errors. |

2.2 Bug Management and Trace

Bug Record includes:

\*Test software

\*Tester

\*Test points

\*Bug specification and classification

\*Bug description

\*Bug priority

\*Necessary screenshot

3.Function testing

3.1Testing items：

User section：Register, Login, Information Management, Facility Booking

AdministratorSection: Login, InformationManagement, Facilities Management,Booking Management

3.2 TestingStrategy

In order to ensure every function works normally, tester used equivalence partitioning testing method to choose valid data and invalid data. For example, the data coversnormal operation, boundary conditions, and errors. Then, testers predicted the output and results of the interaction. Finally, testers comparedand analyzed the result of the actual test with theprediction to improve the system.

3.2.1 Registration(FR1.1)

Test prediction scheme

|  |  |  |  |
| --- | --- | --- | --- |
| User | | | |
| Test items | Test ID | Test point | Prediction |
| Registration | 1 | Use email or user Id which is already existed to register. | Show alert |
| 2 | The email address is not valid | Show alert |
| 3 | User ID/Email/Password is empty. | Show alert |
| 4 | Password is 5 length. | Show alert |
| 5 | Password is 21 length. | Show alert |
| 6 | Password includes special characters | Show alert |
| 7 | Password validation is empty | Show alert |
| 8 | Password validation is not same with the original password. | Show alert |
| 9 | Password validation is same with the original password. | pass |
| 10 | User ID and email is valid and unique | pass |
| 11 | Password is 6-20 length and only includes letters and number. | pass |

Test recording report

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Error Message | Test Results | Bug Classification | Date |
| 1 | NO | Show alert |  | 2019.05.23 |
| 2 | NO | Show alert |  | 2019.05.23 |
| 3 | NO | Show alert |  | 2019.05.23 |
| 4 | NO | Show alert |  | 2019.05.23 |
| 5 | NO | Show alert |  | 2019.05.23 |
| 6 | NO | Show alert |  | 2019.05.23 |
| 7 | NO | Show alert |  | 2019.05.23 |
| 8 | NO | Show alert |  | 2019.05.23 |
| 9 | NO | pass |  | 2019.05.23 |
| 10 | NO | pass |  | 2019.05.23 |
| 11 | NO | pass |  | 2019.05.23 |

3.2.2Login (FR1.2)

Test prediction scheme

|  |  |  |  |
| --- | --- | --- | --- |
| User/Admin | | | |
| Test items | Test ID | Test point | Prediction |
| Login | 1 | User/Admin existed account and right password to login. | Login successfully. |
| 2 | Wrong password. | Show alert |
| 3 | Use nonexistent account to login. | Show alert |
| 4 | Password is empty. | Show alert |
| 5 | User/Admin ID/Email is empty. | Show alert |

Test recording report

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Error Message | Test Results | Bug Classification | Date |
| 1 | NO | Login successfully. |  | 2019.05.23 |
| 2 | NO | Show alert |  | 2019.05.23 |
| 3 | NO | Show alert |  | 2019.05.23 |
| 4 | NO | Show alert |  | 2019.05.23 |
| 5 | NO | Show alert |  | 2019.05.23 |

3.2.3Account Recovery (FR1.3)

Test prediction scheme

|  |  |  |  |
| --- | --- | --- | --- |
| User/Admin | | | |
| Test items | Test ID | Test point | Prediction |
| AccountRecovery | 1 | Input existed User/Admin ID or Email. | Receive email to reset password |
| 2 | Input nonexistent User/AdminID or Email. | Show alert |

Test recording report

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Error Message | Test Results | Bug Classification | Date |
| 1 | NO | Receive email to reset password |  | 2019.05.23 |
| 2 | NO | Show alert |  | 2019.05.23 |

3.2.4Account Information Update(FR1.4)

Test prediction scheme

|  |  |  |  |
| --- | --- | --- | --- |
| User/Admin | | | |
| Test items | Test ID | Test point | Prediction |
| Edit(User/Admin) | 1 | Viewinguser information correctly | Yes |
| 2 | Fill all information in the form | Yes |
| 3 | Name is empty | Cannot be modified |
| 4 | Tel is empty | Cannot be modified |
| 5 | Checking for updates immediately | Yes |
| Delete (Admin) | 6 | Cannot see the user again after deleting | Yes |

Test recording report

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Error Message | Test Results | Bug Classification | Date |
| 1 | NO | Pass |  | 2019.05.23 |
| 2 | NO | Pass |  | 2019.05.23 |
| 3 | NO | Fail |  | 2019.05.23 |
| 4 | NO | Fail |  | 2019.05.23 |
| 5 | NO | Pass |  | 2019.05.23 |
| 6 | NO | Pass |  | 2019.05.23 |

3.2.5 Search Facility(FR2.1)

Test prediction scheme

|  |  |  |  |
| --- | --- | --- | --- |
| Admin/User | | | |
| Test items | Test ID | Test point | Prediction |
| SearchFacility | 1 | All results containing the search keyword(s) will be displayed | Yes |
| 2 | keyword is a letter | Displayed all results contain that letter |
| 3 | keyword is a word | Displayed all results contain that word |
| 4 | Keyword do not exist | Cannot search |
| 5 | Keyword is wrong | Cannot search |

Test recording report

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Error Message | Test Results | Bug Classification | Date |
| 1 | NO | Pass |  | 2019.05.23 |
| 2 | NO | Pass |  | 2019.05.23 |
| 3 | NO | Pass |  | 2019.05.23 |
| 4 | NO | Fail |  | 2019.05.23 |
| 5 | NO | Fail |  | 2019.05.23 |

3.2.6 Update Facility (FR2.3-2.4)

Test prediction scheme

|  |  |  |  |
| --- | --- | --- | --- |
| Admin | | | |
| Test items | Test ID | Test point | Prediction |
| Add/EditFacility | 1 | Viewinguser information correctly | Yes |
| 2 | Fill all information in the form | Yes |
| 3 | Open time is empty | Cannot be modified |
| 4 | Close time is empty | Cannot be modified |
| 5 | Description is empty | Cannot be modified |
| 6 | Capacity is empty | Yes |
| 7 | Duration is empty | Yes |
| 8 | Contact is empty | Cannot be modified |
| 9 | Tel is empty | Cannot be modified |
| 10 | Price is empty | Cannot be modified |
| 11 | Image is empty | Yes |
| 12 | Checking for updates immediately? | Yes |
| Delete Facility | 13 | Cannot see the user again after deleting | Yes |

Test recording report

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Error Message | Test Results | Bug Classification | Date |
| 1 | NO | Pass |  | 2019.05.23 |
| 2 | NO | Pass |  | 2019.05.23 |
| 3 | NO | Fail |  | 2019.05.23 |
| 4 | NO | Fail |  | 2019.05.23 |
| 5 | NO | Fail |  | 2019.05.23 |
| 6 | NO | Pass |  | 2019.05.23 |
| 7 | NO | Pass |  | 2019.05.23 |
| 8 | NO | Fail |  | 2019.05.23 |
| 9 | NO | Fail |  | 2019.05.23 |
| 10 | NO | Fail |  | 2019.05.23 |
| 11 | NO | Pass |  | 2019.05.23 |
| 12 | NO | Pass |  | 2019.05.23 |
| 13 | NO | Pass |  | 2019.05.23 |

3.2.6 Facility Booking (FR3.1-4.2)

Test prediction scheme

|  |  |  |  |
| --- | --- | --- | --- |
| Admin/User | | | |
| Test items | Test ID | Test point | Prediction |
| Add Booking | 1 | Add booking without choose facility | Cannot add |
| 2 | Add booking for multiply facilities | Yes |
| 3 | Add booking if the capacity is maximum | Cannot add |
| 4 | Add booking in the past date | Cannot add |
| 5 | Add booking today | Yes |
| 6 | Add booking in the future date(within two months) | Yes |
| 7 | Add booking in the future date(over two months) | Cannot add |
| 8 | Add booking without choose member | Yes |
| 9 | Add booking that is booked by user | Yes |
| DeleteBooking | 10 | Remove booking that booked by user | Yes |
| 11 | Remove booking that booked by admin | Yes |
| 12 | After removing, it can be booked again | Yes |
| Booking Calendar | 13 | Viewing booking on calendar | Yes |
| 14 | Remove booking on calendar | Yes |
| 15 | Choose the date to book using month calendar | Yes |
| 16 | Choose the date to book using week calendar | Yes |
| 17 | Choose the date to book using day calendar | Yes |

Test recording report

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Error Message | Test Results | Bug Classification | Date |
| 1 | NO | Cannot add |  | 2019.05.23 |
| 2 | NO | Yes |  | 2019.05.23 |
| 3 | NO | Cannot add |  | 2019.05.23 |
| 4 | NO | Cannot add |  | 2019.05.23 |
| 5 | NO | Yes |  | 2019.05.23 |
| 6 | NO | Yes |  | 2019.05.23 |
| 7 | NO | Cannot add |  | 2019.05.23 |
| 8 | NO | Yes |  | 2019.05.23 |
| 9 | NO | Yes |  | 2019.05.23 |
| 10 | NO | Yes |  | 2019.05.23 |
| 11 | NO | Yes |  | 2019.05.23 |
| 12 | NO | Yes |  | 2019.05.23 |
| 13 | NO | Yes |  | 2019.05.23 |
| 14 | NO | Yes |  | 2019.05.23 |
| 15 | NO | Yes |  | 2019.05.23 |
| 16 | NO | Yes |  | 2019.05.23 |
| 17 | NO | Yes |  | 2019.05.23 |

4.Non-function testing

4.1 Form testing

|  |  |  |  |
| --- | --- | --- | --- |
| Test ID | Test point | Prediction | Result(√/×) |
| 1 | The submitted information does not meet the requirements | Cannot pass | × |
| 2 | The submitted information meets the requirements | Pass | √ |
| 3 | Bypass requirements to submit the form | Cannot pass | × |

4.2Database Testing

|  |  |  |  |
| --- | --- | --- | --- |
| Test ID | Test point | Prediction | Result(√/×) |
| 1 | The information of database is consistent | Yes | √ |
| 2 | The output information is correct | Yes | √ |

4.3 User Interface Testing

|  |  |  |
| --- | --- | --- |
| Test ID | Test point | Test Evaluation |
| 1 | The text of various interface elements is correct | good |
| 2 | The various interface elements are in the correct state | good |
| 3 | Various interface elements support keyboard operations | good |
| 4 | Various interface elements support mouse operations | good |
| 5 | Reasonable sequence of operations | good |
| 6 | Button order is reasonable | good |
| 7 | Clear navigation | good |
| 8 | Run on mobile devices without users adjusting their devices | good |

4.4Compatibility Testing

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Browser  System | IE7.0 | IE8.0 | IE9.0 | Google | Mozilla |
| Win10 | √ | √ | √ | √ | √ |
| Mac | √ | √ | √ | √ | √ |

4.5Security Testing

|  |  |  |
| --- | --- | --- |
| Test ID | Test point | Test Evaluation |
| 1 | Password Hashing | Pass |
| 2 | Distinguish the user permissions | Pass |
| 3 | Relevant important information is written into the log. | Fail |
| 4 | User can modify his email after receiving a booking confirmation email which might make the admin cannot check who booked facility. | Not safe |