**X. Functional Testing**

Here we design our funtional testing by part. According to the previous design report we present the following categories of funtional testing:

**X.1 Authentication Manager**

In this category the authentication part would be tested. Since the user-interactive authentication part is implemented by other groups, here we focus on authentication redirection and authentication result retrieval.

**X.1.1 Testing set #1**

|  |  |
| --- | --- |
| Scenario: | A user has requested features that request privilege which the user has already obtained (e.g. an anonymouse user requests flight searching). |
| Expected result: | The request is proceeded without authentication. |

**X.1.1 Testing set #2**

|  |  |
| --- | --- |
| Scenario: | An user has requested features that request privilege which needs to obtain by authentication (e.g. an anonymouse user requests flight booking). |
| Expected result: | The request is rejected and the user is redirected to the authentication page. |

**X.1.1 Testing set #3**

|  |  |
| --- | --- |
| Scenario: | A user has requested features that request privilege of another user group (e.g. a normal user requests flight data insertion, or an administrator requests flight booking). |
| Expected result: | The request is rejected and an error message is shown. |

**X.1.1 Testing set #4**

|  |  |
| --- | --- |
| Scenario: | A previous authentication has been redirected back and the authentication is accepted. |
| Expected result: | The previous request is proceeded. |

**X.1.1 Testing set #5**

|  |  |
| --- | --- |
| Scenario: | A previous authentication has been redirected back and the authentication is rejected. |
| Expected result: | The previous request is rejected and an error message is shown. |

**X.2 Booking Manager**

In this category the booking part would be tested. Here we design testings for the two major functions: order placing and order cancelling.

**X.2.1 Testing set #6**

|  |  |
| --- | --- |
| Scenario: | A user has requested placing orders with correct parameters. |
| Expected result: | The request is proceeded correctly. |

**X.2.2 Testing set #7**

|  |  |
| --- | --- |
| Scenario: | A user has requested placing orders with incorrect parameters. |
| Expected result: | The request is rejected and en error message is shown. |

**X.2.3 Testing set #8**

|  |  |
| --- | --- |
| Scenario: | A user has requested cancelling orders with correct parameters. |
| Expected result: | The request is proceeded correctly. |

**X.2.4 Testing set #9**

|  |  |
| --- | --- |
| Scenario: | A user has requested cancelling orders with incorrect parameters. |
| Expected result: | The request is rejected and en error message is shown. |

**X.3 Comment Manager**

In this category the commenting part would be tested. We design testings for comment making, viewing, and modifications.

**X.3.1 Testing set #10**

|  |  |
| --- | --- |
| Scenario: | A user has requested to make comments with correct parameters. |
| Expected result: | The request is proceeded correctly. |

**X.3.2 Testing set #11**

|  |  |
| --- | --- |
| Scenario: | A user has requested to make comments with incorrect parameters. |
| Expected result: | The request is rejected and en error message is shown. |

**X.3.3 Testing set #12**

|  |  |
| --- | --- |
| Scenario: | A user has requested to view comments with correct parameters. |
| Expected result: | The request is proceeded correctly. |

**X.3.4 Testing set #13**

|  |  |
| --- | --- |
| Scenario: | A user has requested to view comments with incorrect parameters. |
| Expected result: | The request is rejected and en error message is shown. |

**X.3.5 Testing set #14**

|  |  |
| --- | --- |
| Scenario: | A user has requested to modify comments with correct parameters. |
| Expected result: | The request is proceeded correctly. |

**X.3.6 Testing set #15**

|  |  |
| --- | --- |
| Scenario: | A user has requested to modify comments with incorrect parameters. |
| Expected result: | The request is rejected and en error message is shown. |

**X.4 Searching Manager**

In this category the searching part would be tested. This part is somehow less risky, since what it does is only to get data then present to user, but not to write to the database. But it shall be still as robust as the other parts, since most user interactions happens here.

**X.4.1 Testing set #16**

|  |  |
| --- | --- |
| Scenario: | A user has requested to search hotels. |
| Expected result: | The request is proceeded according to the incoming parameters. |

**X.4.2 Testing set #17**

|  |  |
| --- | --- |
| Scenario: | A user has requested to search flights. |
| Expected result: | The request is proceeded according to the incoming parameters. |

**X.5 Administrator Manager**

In this category the administrator part would be tested. We design testing for functions when viewing, inserting, removing, and modifying data.

**X.5.1 Testing set #18**

|  |  |
| --- | --- |
| Scenario: | A user has requested to view existing data with administrator privileges. |
| Expected result: | The request is proceeded according to the incoming parameters. |

**X.5.2 Testing set #19**

|  |  |
| --- | --- |
| Scenario: | A user has requested to insert data with administrator privileges. |
| Expected result: | The request is proceeded according to the incoming parameters. |

**X.5.3 Testing set #20**

|  |  |
| --- | --- |
| Scenario: | A user has requested to remove exsisting data with administrator privileges. |
| Expected result: | The request is proceeded according to the incoming parameters. |

**X.5.4 Testing set #21**

|  |  |
| --- | --- |
| Scenario: | A user has requested to modify data with administrator privileges. |
| Expected result: | The request is proceeded according to the incoming parameters. |