**TEST DOCUMENTATION**

# 1. Testing Objective

The objective of this document is to document the steps taken to test our system. The test cases listed will be used to verify if our system works properly.

# 2. Testing Scope

We will be doing both frontend testing and backend testing.

Backend Testing

To test the backend server , we will be using postman to test that the API endpoints are functioning as intended through Black Box Testing. This is to ensure that the integration with the frontend will be smooth.

Frontend Testing

We will conduct subsystem testing for frontend. This will be the last stage of testing when all integrations between components have been shown to work and the system is functional. We will be using white box testing such as control flow testing to determine the execution order of statements or instructions of the programme through a control structure.

# 3. Backend Test Cases

## 3.1 Black Box Testing

### 3.1.1 Integration Testing

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Case | API / Test Input | Expected Result | Test Result | Pass / Fail |
| Create user account | POST: <http://localhost:3000/api/users/register>  {  "email": "test@gmail.com",  "name": "test", | HTTP\_201\_CRE ATED | HTTP\_201\_CRE ATED | Pass |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | "password": "test", "phone":"12345678"  } |  |  |  |
| Create user with duplicate email | POST: <http://localhost:3000/api/users/register>  {  "email":"test@gmail.com",  "username":"test2", "password":"yooo", "phone":"12312414"  } | HTTP\_400\_BAD \_REQUEST | HTTP\_400\_BAD \_REQUEST | Pass |
| Login with valid credentials | POST: <http://localhost:3000/api/users/login>  {  "username":  "test", "password":  "test"  } | HTTP\_200\_OK | HTTP\_200\_OK | Pass |
| Login with invalid username | POST: <http://localhost:3000/api/users/login>  {  "username":  "supp", "password":  "test"  } | HTTP\_404\_NOT \_FOUND | HTTP\_404\_NOT \_FOUND | Pass |
| Login with wrong password | POST: <http://localhost:3000/api/users/login>  {  "username":  "test", "password":  "testtt"  } | HTTP\_401\_UNA UTHORIZED | HTTP\_401\_UNA UTHORIZED | Pass |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Upload a Post with correct fields filled | POST: [http://localhost:3000/api](http://localhost:3000/api/categories)/posts/  {        “itemName”: “Lost phone”        “isLost”: “true”        “images”:        “location”: “NTU”        “ListedBy”: “test”        “date”: “2023-04-04”        “time”: “17:00:00”        “itemDescription”: “black ,last seen near subway”        “category: “Electronics ID”        “isResolved”: “false”  } | HTTP\_200\_OK | HTTP\_200\_OK | Pass |
| Upload a post without location | POST: [http://localhost:3000/api](http://localhost:3000/api/categories)/posts/  {        “itemName”: “Lost phone”        “isLost”: “true”        “images”:        “location”:        “ListedBy”: “test”        “date”: “2023-04-04”        “time”: “17:00:00”        “itemDescription”: “black ,last seen near subway”        “category: “Electronics ID”        “isResolved”: “false”  } | HTTP\_400\_BAD \_REQUEST | HTTP\_404\_BAD \_REQUEST | Pass |
| Upload a post without itemName | POST: [http://localhost:3000/api](http://localhost:3000/api/categories)/posts/  {        “itemName”:        “isLost”: “true”        “images”:        “location”: “NTU”        “ListedBy”: “test”        “date”: “2023-04-04”        “time”: “17:00:00”        “itemDescription”: “black ,last seen near subway”        “category: “Electronics ID”        “isResolved”: “false”  } | HTTP\_400\_BAD \_REQUEST | HTTP\_404\_BAD \_REQUEST | Pass |
| Delete User with correct ID | DELETE: http://localhost:3000/api/users/<ID OF USER> | HTTP\_200\_OK | HTTP\_200\_OK | Pass |
| Delete User with not existing ID | DELETE: http://localhost:3000/api/users/<ID OF USER> | HTTP\_404\_NOT \_FOUND | HTTP\_404\_NOT \_FOUND | Pass |
| Edit User with correct ID | PUT: http://localhost:3000/api/users/<ID OF USER>  {  "email":"test@gmail.com",  "username":"test5", "password":"yoohoohoo", "phone":"12312414"  } | HTTP\_200\_OK | HTTP\_200\_OK | Pass |
| Edit User with not existing ID | PUT: http://localhost:3000/api/users/<ID OF USER>  {  "email":"test@gmail.com",  "username":"test5", "password":"yoohoohoo", "phone":"12312414"  } | HTTP\_404\_NOT \_FOUND | HTTP\_404\_NOT \_FOUND | Pass |
| Get posts with authenticated token | GET: :[http://localhost:3000/api](http://localhost:3000/api/categories)/posts/ | HTTP\_200\_OK | HTTP\_200\_OK | Pass |
| Get posts without authenticated token | GET: :[http://localhost:3000/api](http://localhost:3000/api/categories)/posts/ | HTTP\_401\_UNA UTHORIZED | HTTP\_401\_UNA UTHORIZED | Pass |
| Get Users with authenticated token | GET: :[http://localhost:3000/api](http://localhost:3000/api/categories)/users/ | HTTP\_200\_OK | HTTP\_200\_OK | Pass |
| Get Users without authenticated token | GET: :[http://localhost:3000/api](http://localhost:3000/api/categories)/users/ | HTTP\_401\_UNA UTHORIZED | HTTP\_401\_UNA UTHORIZED | Pass |
| Get posts of a user with existing ID | GET: <http://localhost:3000/api/users/userposts/><ID OF USER> | HTTP\_200\_OK | HTTP\_200\_OK | Pass |
| Get posts of a user with existing ID | GET: <http://localhost:3000/api/users/userposts/><ID OF USER> | HTTP\_404\_NOT \_FOUND | HTTP\_404\_NOT \_FOUND | Pass |
| Get list of Categories | GET: <http://localhost:3000/api/categories> | HTTP\_200\_OK | HTTP\_200\_OK | Pass |
| Delete post with correct ID | DELETE:[http://localhost:3000/api](http://localhost:3000/api/categories)/posts/<POST ID> | HTTP\_200\_OK | HTTP\_200\_OK | Pass |
| Delete post with not existing ID | DELETE:[http://localhost:3000/api](http://localhost:3000/api/categories)/posts/<POST ID> | HTTP\_404\_NOT \_FOUND | HTTP\_404\_NOT \_FOUND | Pass |
| Get map pins | GET: :[http://localhost:3000/api](http://localhost:3000/api/categories)/pins | HTTP\_200\_OK | HTTP\_200\_OK | Pass |

# 4.Frontend Test Cases

## 4.1 White Box Testing

### Sign up/Create new user

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Scenario**  **ID** | | Register-1 | | |  | **Test Case ID** | | | Register-1A | | |  |
| **Test Case**  **Description** | | Registration – Positive Test Case | | |  | **Test Priority** | | | High | | |  |
| **Pre-Requisite** | | Stable Internet Connection | | |  | **Post-Requisite** | | | NA | | |  |
| **Test Execution Steps:** | | | | |  | | | | | | |  |
| **S.**  **No** | **Action** | | **Inputs** | **Expected**  **Output** | **Actual**  **Output** | | | **Test**  **Device** | | | **Test**  **Result** | **Test**  **Comments** |
| 1 | Launch  application | | - | Login Page | Login Page | | | IOS  Emulator | | | Pass | Launch successful |
| 2 | Click signup | | - | Register page | Register Page | | | IOS  Emulator | | | Pass | Register |
| 3 | Sign up with valid credentials | | "email":"test@gmail.com",  "username":"test", "password":"yoohoohoo", "phone":"12312414" | Login page | Login Page | | | IOS  Emulator | | | Pass | Password will be stored in a password hash to maintain security |
| **Test Scenario**  **ID** | | Register-2 | | | | | **Test Case ID** | | | Register-2A | | |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Case**  **Description** | | Registration – Negative Test Case | | |  | **Test Priority** | | High | |  |
| **Pre-Requisite** | | Stable Internet Connection | | |  | **Post-Requisite** | | NA | |  |
| **Test Execution Steps:** | | | | |  | | | | |  |
| **S.No** | **Action** | | **Inputs** | **Expected**  **Output** | **Actual**  **Output** | | **Test**  **Browser** | | **Test**  **Result** | **Test**  **Comments** |
| 1 | Launch  application | | - | Login Page | Login Page | | IOS  Emulator | | Pass |  |
| 2 | Click signup | | - | Register page | Register Page | | IOS  Emulator | | Pass |  |
| 3 | Enter used email, everything else valid | | "email":"test@gmail.com",  "username":"test123", "password":"yoohoohoo", "phone":"12312414" | Email Invalid | Email Invalid | | IOS  Emulator | | Pass |  |
| 4 | Enter everything except username | | "email":"test123@gmail.com",  "username": , "password":"yoohoohoo", "phone":"12312414" | Username not entered | Username not entered | | IOS  Emulator | | Pass |  |
| 5 | Enter everything except password | | "email":"test123@gmail.com",  "username": "test123", "password":, "phone":"12312414" | Password not entered | Password not entered | | IOS  Emulator | | Pass |  |
| 6 | Enter everything except phone | | "email":"test123@gmail.com",  "username": "test123", "password":"yoohoohoo", "phone": | Phone not entered | Phone not entered | | IOS  Emulator | | Pass |  |

Diagram

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### Login

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Scenario ID** | | Login-1 | | **Test Case ID** | | Login-1A | |  |
| **Test Case**  **Description** | | Login – Positive Test Case | | **Test Priority** | | High | |  |
| **Pre-Requisite** | | Stable Internet Connection and  Already Registered | | **Post-Requisite** | | NA | |  |
| **Test Execution Steps:** | | | |  | | | |  |
| **S. No** | **Action** | **Inputs** | **Expected**  **Output** | **Actual**  **Output** | **Test**  **Browser** | | **Test**  **Result** | **Test**  **Comments** |
| 1 | Launch  applicatio n | - | Login Page | Login Page | IOS  Emulator | | Pass |  |
| 2 | Enter  Valid  Username and Password | "username":"test", "password":"yoohoohoo" | Home page | Home  page | IOS  Emulator | | Pass | Token is generated and stored in this login instance |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Scenario**  **ID** | | Login-2 | | |  | **Test Case ID** | | Login-2A | |  |
| **Test Case**  **Description** | | Login – Negative Test Case | | |  | **Test Priority** | | High | |  |
| **Pre-Requisite** | | Stable Internet Connection | | |  | **Post-Requisite** | | NA | |  |
| **Test Execution Steps:** | | | | |  | | | | |  |
| **S. No** | **Action** | | **Inputs** | **Expected**  **Output** | **Actual**  **Output** | | **Test**  **Browser** | | **Test**  **Result** | **Test**  **Comments** |
| 1 | Launch  application | | - | Login Page | Login Page | | IOS  Emulator | | Pass |  |
| 2 | Enter invalid username and a password | | "username":"test342948", "password":"yoohoohoo" | Login failed | Login failed | | IOS  Emulator | | Pass | Display invalid username pop up |
| 3 | Enter valid username and invalid password | | "username":"test", "password":"yo" | Login failed | Login failed | | IOS  Emulator | | Pass | Display wrong password pop up |

Diagram

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### View Post

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Scenario ID** | | View Post | | **Test Case ID** | | ViewPost | | |
| **Test Case**  **Description** | | View Post – Positive Test  Case | | **Test Priority** | | High | | |
| **Pre-Requisite** | | Stable Internet Connection and logged in | | **Post-Requisite** | | NA | | |
| **Test Execution Steps:** | | | |  | | | | |
| **S. No** | **Action** | **Inputs** | **Expected**  **Output** | **Actual**  **Output** | **Test**  **Browser** | | **Test**  **Result** | **Test**  **Comments** |
| 1 | Login | Successful log in | Home page | Home page | IOS  Emulator | | Pass |  |
| 2 | Scroll | - | Posts will be shown based on recency | Posts shown based on recency | IOS  Emulator | | Pass |  |

### View Map

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Scenario ID** | | View Map | | **Test Case ID** | | ViewMap | | |
| **Test Case**  **Description** | | View Map – Positive Test  Case | | **Test Priority** | | High | | |
| **Pre-Requisite** | | Stable Internet Connection and location services enabled | | **Post-Requisite** | | NA | | |
| **Test Execution Steps:** | | | |  | | | | |
| **S. No** | **Action** | **Inputs** | **Expected**  **Output** | **Actual**  **Output** | **Test**  **Browser** | | **Test**  **Result** | **Test**  **Comments** |
| 1 | Click on the view Map icon | - | Home page | Home page | IOS  Emulator | | Pass | Location shows in NTU successful |
| 2 | Scroll the map | - | Current location shown in blue and post location shown in red | Current location shown in blue and post location shown in red | IOS  Emulator | | Pass | Post show up as clickable pins |
| 2 | Click on the post pins | - | Pins will show the title and description of the post | Pins will show the title and description of the post | IOS  Emulator | | Pass |  |

### Create Post

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Scenario**  **ID** | | Create Post | | |  | **Test Case ID** | | CreatePost-1A | | |
| **Test Case**  **Description** | | Create Post – Positive Test  Case | | |  | **Test Priority** | | High | | |
| **Pre-Requisite** | | Stable Internet Connection and logged in | | |  | **Post-Requisite** | | NA | | |
| **Test Execution Steps:** | | | | |  | | | | | |
| **S. No** | **Action** | | **Inputs** | **Expected**  **Output** | **Actual**  **Output** | | **Test**  **Browser** | | **Test**  **Result** | **Test**  **Comments** |
| 1 | Click the Plus icon to create post | | - | Create post page | Create post page | | IOS  Emulator | | pass |  |
| 2 | Enter valid Post  details | | {        itemName: Lost phone        isLost: true        images: ~        location: NTU        date: 2023-04-04        time: 17:00:00        itemDescription: black ,last seen near subway        category: Electronics  } | Post created successfully | Post created Successfully | | IOS  Emulator | | pass | Fields are shown in json format but entered using the phone app which consist of textbox, drop down boxes and checkboxes.  Post shows up on the view post page and on the user’s profile page |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Scenario**  **ID** | | Create Post | | |  | **Test Case ID** | | CreatePost-2A | | |
| **Test Case**  **Description** | | Create Post – Negative Test  Case | | |  | **Test Priority** | | High | | |
| **Pre-Requisite** | | Stable Internet Connection and logged in | | |  | **Post-Requisite** | | NA | | |
| **Test Execution Steps:** | | | | |  | | | | | |
| **S.**  **No** | **Action** | | **Inputs** | **Expected**  **Output** | **Actual**  **Output** | | **Test**  **Browser** | | **Test**  **Result** | **Test**  **Comments** |
| 1 | Click the Plus icon to create post | | - | Create post  page | Create post  page | | IOS  Emulator | | pass |  |
| 2 | Enter all details except location | | {        itemName: Lost phone        isLost: true        images:        location:        date: 2023-04-04        time: 17:00:00        itemDescription: black ,last seen near subway        category: Electronics  } | Location not filled, post not uploaded | Location not filled, post not uploaded | | IOS  Emulator | | pass | Image and item description are optional fields. Category, date and time are have a fixed format and options with a default option. These fields will not be tested |
| 3 | Enter all details except itemName | | {        itemName:        isLost: true        images:        location: NTU        listedBy: test        date: 2023-04-04        time: 17:00:00        itemDescription: black ,last seen near subway        category: Electronics  } | Item Name not filled, post not uploaded | Item Name not filled, post not uploaded | | IOS  Emulator | | pass |  |

Diagram

Description automatically generated