**Part 1: Test Planning & Analysis**

* 1. Requirements Analysis  
     1.1.1 Explore Sign-Up Flow:
* Navigate to EchoGPT sign-up page.
* Input information such as: First Name, Last Name, and Email.
* Optional checkbox: Receive update about EchoGPT.
* Social Sign-Up Options:  
  -> Google works, users can sign-up successfully.  
  -> GitHub works, users can sign-up successfully.

-> X does not work.

* Verify account: Receive a verification OTP and confirm your account.
* Access User Dashboard: Log in to the site and use EchoGPT.
  1. Requirements Analysis [Explicit Requirements]  
     1.1.2 Input Fields:
* First Name.
* Last Name.
* Email Address.

1.1.2 Action Fields:

* “Send OTP” button.
* “Agree to Terms” checkbox.

1.1.2 Validation:

|  |  |  |  |
| --- | --- | --- | --- |
| Validation Type | Expected Behavior | Current Behavior | Status (Pass/Fail) |
| Email | Accept only valid email format. | Accepts invalid email format with special characters. ex: -@c | Fail |
| Name | Accepts alphabetical letters and limit is 15 char. ex: Arefin | Accepts special characters, numbers and spaces. ex: ++/123 | Partial Pass |
| OTP | OTP should expire after a certain time. ex: 2/3 min | OTP has no time limit. | Fail |
| Welcome Email | Observed users got mail after successful registeration. | Users got welcome mail. | Pass |

* 1. Requirements Analysis [Implicit Requirements / Assumptions]  
     1.1.3 OTP / Email Verification Link:
* Currently it has no expiry, Assumption: It should expire within 2 hours for security.

1.1.3 Password Rules:

* Password must be at least 8 characters, and max is 15 characters long.
* Password must be in one Upper & Lower-case letter, one Special character and one Digit.

1.1.3 Multi-Language Support:

* Assumption: Platform may support multiple languages.
  1. Requirements Analysis  
     1.1.4 Potential User Personas:
* Student / Researcher: Users reaching AI for learning or research purposes.
* Occasional Users: Users who are exploring AI for randomly.
* Tech-Savvy users: Frequent AI tool users.
* Professionals: Using AI to boost work productivity.
  1. Test Strategy Development  
     1.2.1 Scope of Testing:
* Functionality of all input fields.
* Email verification process.
* Third party login integrations. (ex, Google, GitHub).
* UI responsiveness across devices.

1.2.1 Out of Scope:

* Content generation features of EchoGPT.
* User profile management post-sign-up.
* Advanced AI functionalities.
* Dashboard and subscription/payment features.

1.2.2 Test Objectives:

* Ensure all input fields accept valid data and reject invalid entries.
* Verify email verification emails are sent in real time.
* Confirm users can log in to post-registration.

1.2.2 Success Criteria:

* 100% acceptance of valid data inputs.
* Email verification received within 5 minutes.
* Users’ Successful login after email verification.

1.2.3 Risk Assessment:

|  |  |  |
| --- | --- | --- |
| Area | Risk Level | Notes |
| Email Verification Process | High | Critical for account verification |
| Third Party Login Integration | Medium | Potential for OAuth issues. |
| UI responsiveness | Low | Impact user experience on across devices. |

1.2.4 Testing approaches:

* Functional Testing: Verify all features work as expected requirements.
* Usability Testing: Verify the system is user friendly.
* Security Testing: Ensure data security and secure authentication.
* Performance Testing: Verify system load is under pressure.

1.2.5 Test environment:

* Browsers: Google Chrome, Edge, etc.
* Devices: Desktop Windows, Mobile (Android).
* Network: Stable internet connection.

1.2.6 Entry and exit criteria:  
 Entry Criteria:

* Test environment set up.
* Test data prepared and available.
* Test team brief on objectives and scope.

Exit Criteria:

* Resolve all critical and major defects.
* Test coverage meets defined objectives.
* Test summary report prepared and reviewed.