Part 1: Test Planning & Analysis

Software Quality Assurance (SQA) Assignment
EchoGPT

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1 Requirements Analysis

1.1 Sign-Up Process Flow (Observed from EchoGPT Website)

1. User clicks **"Sign In"** button on the homepage.
2. User is redirected to the sign-in/sign-up modal.
3. Available sign-up options:
   - Email-based sign-up (email + password, possibly verification required)
   - OAuth Sign-up: Google, Twitter, GitHub
   - Optional checkbox to receive product updates
4. By signing up, user accepts Terms of Use and Privacy Policy.

1.2 Explicit Requirements

- Users must be able to create an account using Email, Google, Twitter, or GitHub.
- Email and password fields must be validated.
- Subscription checkbox is optional.
- Terms of Use and Privacy Policy must be accepted before proceeding.
- Successful account creation redirects user to logged-in state.

1.3 Implicit Requirements (Inferred)

- Password must meet minimum security requirements (length, complexity)
- Duplicate email sign-ups must be prevented
- Verification emails may be required
- Error messages should be user-friendly
- OAuth errors must be handled gracefully
- Mobile responsiveness and accessibility must be ensured

1.4 Assumptions

- Users have internet access and modern browsers
- Only frontend testing is performed
- "Sign in with email" allows login and account creation
- Terms of Use and Privacy Policy links are functional
- Email verification is out of scope

1.5 Potential User Personas

- Job Seekers: AI tools for resume and cover letters
- Students/Graduates: Productivity and content assistance
- Professionals: SOPs, reports, social media content
- Developers/Tech Users: Prefer GitHub sign-up
- Casual Users: Experimenting with AI features

2 Test Strategy Development

2.1 Scope of Testing

In Scope:

- Functional testing of sign-up flows (Email, Google, Twitter, GitHub)
- Input field validation
- UI/UX of modal (buttons, links, responsiveness)
- Error handling (invalid inputs, failed OAuth)
- Basic security checks
- Cross-browser and device compatibility

Out of Scope:

- Backend/database testing
- Email verification delivery
- Performance under high traffic
- Third-party OAuth reliability

2.2 Test Objectives & Success Criteria

- Verify all sign-up methods function correctly
- Ensure correct handling of valid and invalid inputs
- Confirm clear error messages
- Validate Terms of Use and Privacy Policy links
- Check seamless redirection after successful sign-up

Success Criteria

- At least 95% of functional test cases must pass
- No high-severity bugs remain unresolved
- Sign-up process is intuitive, secure, and consistent across devices

2.3 Risk Assessment

- **High Risk:** Broken OAuth, account creation failure
- **Medium Risk:** Weak passwords, duplicate accounts, unclear error messages
- **Low Risk:** UI responsiveness, subscription checkbox issues

2.4 Testing Approaches

- **Functional Testing:** Positive, negative, edge cases
- **Usability Testing:** Intuitive process and clear errors
- **Security Testing:** Password rules, data privacy
- **Performance Consideration:** Page load times
- **Compatibility Testing:** Different browsers and devices

2.5 Test Environment Requirements

- Browsers: Chrome, Firefox, Edge, Safari (latest)
- Devices: Windows, Mac, Android, iOS
- Stable internet connection
- Test accounts for Google, Twitter, GitHub

2.6 Entry & Exit Criteria

Entry Criteria:

- Website accessible and stable
- Test environment ready
- Test cases reviewed and approved

Exit Criteria:

- All planned test cases executed
- All high/medium severity defects resolved/documented
- Test execution and bug reports completed