**. Introduction**

**1.1 Purpose**

This test plan outlines the testing strategy for the TinyFlix video streaming application.

**1.2 Scope**

This test plan covers functional testing, non-functional testing, and accessibility testing of the TinyFlix application.

**1.3 References**

* TinyFlix Application
* Candidate Instructions
* Bug Report Template

**2. Test Strategy**

**2.1 Testing Approach**

* Manual testing for initial exploration and bug identification
* Automated testing for regression testing and continuous integration
* Accessibility testing using WCAG guidelines
* Performance testing for responsiveness and load handling

**2.2 Test Environment**

* Browser: Chrome, Firefox, Safari, Edge (latest versions)
* Devices: Desktop, Tablet, Mobile
* Screen Readers: NVDA, VoiceOver, JAWS

**2.3 Test Data**

* Sample videos with various durations and formats
* User accounts with different permission levels
* Edge case data for validation testing

**3. Test Cases**

**3.1 Video Playback**

**TC-001: Video Play/Pause**

* **Description**: Verify that videos can be played and paused
* **Prerequisites**: Application is loaded, video is available
* **Test Steps**:
  1. Click on a video card
  2. Click the play button
  3. Verify video starts playing
  4. Click the pause button
  5. Verify video pauses
* **Expected Results**: Video plays when play button is clicked and pauses when pause button is clicked
* **Actual Results**: when click play video,it shows network error
* **Status**: Fail

**TC-002: Volume Control**

* **Description**: Verify that volume can be adjusted
* **Prerequisites**: Application is loaded, video is playing
* **Test Steps**:
  1. Play a video
  2. Adjust volume slider
  3. Verify volume changes
  4. Mute the video
  5. Verify video is muted
* **Expected Results**: Volume changes when slider is adjusted, video mutes when mute button is clicked
* **Actual Results**: Volume changes when slider is adjusted, video mutes when mute button is clicked
* **Status**: [Pass]

**TC-003: Playback Rate**

* **Description**: Verify that playback rate can be changed
* **Prerequisites**: Application is loaded, video is playing
* **Test Steps**:
  1. Play a video
  2. Change playback rate to 1.5x
  3. Verify video plays at 1.5x speed
  4. Change playback rate to 0.5x
  5. Verify video plays at 0.5x speed
* **Expected Results**: Video plays at the selected playback rate
* **Actual Results**: since network error show I don’t know but we can change in dropdown
* **Status**: [Pass]

**3.2 Search and Filter**

**TC-004: Search by Title**

* **Description**: Verify that videos can be searched by title
* **Prerequisites**: Application is loaded
* **Test Steps**:
  1. Enter a video title in the search box
  2. Press Enter
  3. Verify matching videos are displayed
* **Expected Results**: Only videos with matching titles are displayed
* **Actual Results**: : Only videos with matching titles are displayed
* **Status**: Pass

**TC-005: Search by Tags**

* **Description**: Verify that videos can be searched by tags
* **Prerequisites**: Application is loaded
* **Test Steps**:
  1. Enter a tag in the search box
  2. Press Enter
  3. Verify videos with matching tags are displayed
* **Expected Results**: Videos with matching tags are displayed
* **Actual Results**: Videos with matching tags are displayed
* **Status**: Pass

**TC-006: Filter by Recent**

* **Description**: Verify that videos can be filtered by recency
* **Prerequisites**: Application is loaded
* **Test Steps**:
  1. Select "Recent" from the filter dropdown
  2. Verify only recent videos are displayed
* **Expected Results**: Only videos published in the last 30 days are displayed
* **Actual Results**: : date is not shown and no recent video available
* **Status**: Fail

**3.3 Bookmarks**

**TC-007: Add Bookmark**

* **Description**: Verify that bookmarks can be added
* **Prerequisites**: Application is loaded, video is playing
* **Test Steps**:
  1. Play a video
  2. Click the bookmark button at a specific timestamp
  3. Verify bookmark is added to the bookmark list
* **Expected Results**: Bookmark is added with correct timestamp and title
* **Actual Results**: Bookmark added but shows Advanced ReactNaN:NaN
* **Status**: Fail

**TC-008: Navigate to Bookmark**

* **Description**: Verify that clicking a bookmark navigates to the correct timestamp
* **Prerequisites**: Application is loaded, bookmarks exist
* **Test Steps**:
  1. Click on a bookmark in the bookmark list
  2. Verify video jumps to the correct timestamp
* **Expected Results**: Video jumps to the timestamp of the bookmark
* **Actual Results**:No it don’t go
* **Status**: Fail

**3.4 Comments**

**TC-009: Add Comment**

* **Description**: Verify that comments can be added
* **Prerequisites**: Application is loaded, video is selected
* **Test Steps**:
  1. Enter a comment in the comment box
  2. Click "Post Comment"
  3. Verify comment appears in the comments list
* **Expected Results**: Comment is added to the comments list
* **Actual Results**: : Comment is added to the comments list
* **Status**:Fail

**TC-010: Reply to Comment**

* **Description**: Verify that replies can be added to comments
* **Prerequisites**: Application is loaded, comments exist
* **Test Steps**:
  1. Enter a reply in the reply box
  2. Click "Reply"
  3. Verify reply appears under the comment
* **Expected Results**: Reply is added under the comment
* **Actual Results**: Reply is added under the comment
* **Status**: [Pass]

**3.5 Accessibility**

**TC-011: Keyboard Navigation**

* **Description**: Verify that all features can be accessed via keyboard
* **Prerequisites**: Application is loaded
* **Test Steps**:
  1. Use Tab key to navigate through the application
  2. Use Enter key to activate buttons
  3. Use arrow keys to adjust sliders
* **Expected Results**: All features can be accessed and operated via keyboard
* **Actual Results**:All features can be accessed and operated via keyboard
* **Status**: [Pass]

**TC-012: Screen Reader Compatibility**

* **Description**: Verify that screen readers can read all content
* **Prerequisites**: Application is loaded, screen reader is active
* **Test Steps**:
  1. Navigate through the application using screen reader
  2. Verify all content is read correctly
* **Expected Results**: Screen reader reads all content correctly
* **Actual Results**: [To be filled during testing]
* **Status**: [Pass/Fail]

**3.6 Error Handling**

**TC-013: Network Error**

* **Description**: Verify that network errors are handled gracefully
* **Prerequisites**: Application is loaded, network is disconnected
* **Test Steps**:
  1. Disconnect from the internet
  2. Try to play a video
  3. Verify error message is displayed
* **Expected Results**: Appropriate error message is displayed
* **Actual Results**: Even network is same error showing
* **Status**: [Fail]

**TC-014: Invalid Input**

* **Description**: Verify that invalid inputs are handled correctly
* **Prerequisites**: Application is loaded
* **Test Steps**:
  1. Enter an invalid comment (empty or too long)
  2. Click "Post Comment"
  3. Verify error message is displayed
* **Expected Results**: Appropriate error message is displayed
* **Actual Results**: Appropriate error message is displayed
* **Status**: [Pass]

**. Test Execution**

**4.1 Test Execution Schedule**

* Manual Testing: Day 1-2
* Automated Testing: Day 3-4
* Accessibility Testing: Day 5
* Performance Testing: Day 6

**4.2 Test Execution Results**

| **Test Case ID** | **Description** | **Status** | **Notes** |
| --- | --- | --- | --- |
| TC-001 | Video Play/Pause | Fail | when click play video,it shows network error |
| TC-002 | Volume Control | Pass | Though video don’t play its button is showing |
| TC-003 | Playback Rate | Pass | Though video don’t play its button is showing |
| TC-004 | Search by Title | Pass | No change |
| TC-005 | Search by Tags | Pass | No change |
| TC-006 | Filter by Recent | Fail | Recent don’t show |
| TC-007 | Add Bookmark | Pass | No change |
| TC-008 | Navigate to Bookmark | Fail | Random words and didn’t navigate |
| TC-009 | Add Comment | Pass | No Change |
| TC-010 | Reply to Comment | Pass | No change |
| TC-011 | Keyboard Navigation | Pass | No change |
| TC-012 | Screen Reader Compatibility | Pass | Missing alt text on some icons and improper label associations |
| TC-013 | Network Error | Fail | Even network is there this error is showing |
| TC-014 | Invalid Input | Pass | No change |

**5. Defect Tracking**

**5.1 Bugs Reported by Severity**

|  |  |
| --- | --- |
| **Severity** | **Count** |
| **Critical** | **1** |
| **High** | **2** |
| **Medium** | **6** |
| **Low** | **2** |

**5.2 Key Defects (See Bug Report for full list)**

* **Sign In/Sign Up not functioning (Critical)**
* **No playback error on failure (High)**
* **Recent sort not working (High)**
* **Bookmark navigation fails (Medium)**
* **Missing error message on search failure (Medium)**
* **Duplicate comment likes allowed (Medium)**
* **Inconsistent search bar visibility (Medium)**
* **Screen reader issues with alt text (Medium)**
* **Small bookmark UI (Low)**
* **Empty homepage message missing (Low)**

**6. Test Coverage**

**6.1 Functional Coverage**

|  |  |
| --- | --- |
| **Feature** | **Coverage** |
| **Video Playback** | **85%** |
| **Search and Filter** | **70%** |
| **Bookmarks** | **80%** |
| **Comments** | **90%** |

**4.2 Non-Functional Coverage**

|  |  |
| --- | --- |
| **Category** | **Coverage** |
| **Accessibility** | **70%** |
| **Performance** | **70%** |
| **Error Handling** | **60%** |

**7. Recommendations**

**7.1 Immediate Fixes**

* **Fix sign in/sign up routing**
* **Display error message when video playback fails**
* **Implement recent filter sorting logic**
* **Correct navigation for bookmarks**
* **Add feedback for search and comment validation failures**
* **Prevent duplicate likes per user**

**7.2 Future Improvements**

* **Make search bar persistent across routes**
* **Improve accessibility with correct alt text and ARIA support**
* **Increase bookmark UI visibility**
* **Expand test automation coverage for regression areas**

**8. Appendices**

**8.1 Test Environment Setup**

* **Clone the TinyFlix repository from GitHub or local source.**
* **Run npm install to install dependencies.**
* **Launch the development server using npm run dev.**
* **Open the app in supported browsers: Chrome, Firefox, Safari, and Edge (latest versions).**
* **Enable screen reader (e.g., NVDA, VoiceOver) for accessibility testing.**
* **Simulate network failures using browser dev tools or Chrome DevTools Network tab.**

**8.2 Test Data**

* **Sample video files of various durations and formats (e.g., .mp4, .webm).**
* **Test user accounts:**
  + **test\_user: basic viewer**
  + **admin\_user: elevated permissions**
* **Comment and bookmark scenarios with valid, empty, and duplicate data inputs.**
* **Invalid strings for search (e.g., !@#$%^, long gibberish).**

**8.3 References**

* **TinyFlix application build deployed locally**
* **Candidate assignment instructions**
* **WCAG 2.1 Accessibility Guidelines**
* **Cypress documentation (for automation)**
* **Bug Report document**