**Test Plan for YouTube Feature Testing**

**Test Case 1: Search Functionality**

- Test Case Name: Verify Search Functionality

- Objective: To verify that the search functionality works correctly by returning relevant video results.

- Preconditions: User is on the YouTube homepage.

- Test Steps:

1. Locate the search box on the YouTube homepage.

2. Enter a specific search term (e.g., "Nature Documentary").

3. Press the search button or hit enter.

- Expected Results: The page displays videos related to the search term, and the search term appears in the page title.

**Test Case 2: Video Playback in Full Screen**

- Test Case Name: Verify Full Screen Video Playback

- Objective: To ensure that videos can be played back in full screen mode and then returned to normal mode without issues.

- Preconditions: User has navigated to a specific video on YouTube.

- Test Steps:

1. Click the play button to start video playback.

2. Click the full screen button on the video player.

3. Verify full screen mode is activated.

4. Exit full screen mode by clicking the exit full screen button or pressing the escape key.

- Expected Results: The video enters and exits full screen mode correctly, with no disruptions in playback.

**Test Case 3: Muting and Unmuting a Video**

- Test Case Name: Verify Mute Functionality

- Objective: To check if users can mute and unmute a video during playback.

- Preconditions: A video is currently being played on YouTube.

- Test Steps:

1. Click the mute button on the video player.

2. Verify the video is muted.

3. Click the mute button again to unmute the video.

- Expected Results: The video is successfully muted and unmuted, with the mute icon changing accordingly.

**Test Case 4: Using the Miniplayer Mode**

- Test Case Name: Verify Miniplayer Functionality

- Objective: To verify that the miniplayer mode works correctly, allowing users to browse YouTube while keeping a video playing in a small window.

- Preconditions: A video is currently being played on YouTube.

- Test Steps:

1. Click the miniplayer button on the video player.

2. Verify the video continues playing in the miniplayer window.

3. Click the expand button on the miniplayer to return to the regular video view.

- Expected Results: The video seamlessly transitions to and from miniplayer mode without stopping.

**Test Case 5: Switching to Dark Mode**

Test Case Name: Verify Dark Mode Functionality

- Objective: To verify that users can successfully switch to Dark Mode in the YouTube interface and that the interface reflects this change accurately.

- Preconditions:

- User is logged in to YouTube (if account-specific settings are required).

- User is on the YouTube homepage or within any YouTube page where the theme can be changed.

- Test Steps:

1. Click on the user avatar or menu icon to access YouTube settings/options.

2. Navigate to the "Appearance" settings (the navigation path may vary based on YouTube updates).

3. Select the "Dark theme" option from the available theme preferences.

4. Wait for the interface to refresh and apply the dark theme.

- Expected Results:

- The YouTube interface switches to Dark Mode, changing the background color to dark shades and text to light colors for enhanced readability.

- User preferences are saved for future sessions, ensuring the Dark Mode setting persists across different browsing sessions or device reboots, provided the user is logged in.

**Test Case 6: Switching to Light Mode**

Test Case Name: Verify Light Mode Functionality

- Objective: To ensure that users can switch to Light Mode from any other theme setting and that the change is accurately reflected across the YouTube interface.

- Preconditions:

- User is logged into their YouTube account.

- The user is on any page within YouTube that supports theme changes.

- Test Steps:

1. Access the settings or options menu by clicking on the user avatar or a designated menu icon.

2. Look for the "Appearance" or theme settings within the menu options.

3. Choose the "Light theme" option from the list of available themes.

4. Observe the interface as it updates to apply Light Mode.

- Expected Results:

- The entire YouTube interface updates to Light Mode, featuring a light background with dark text for standard visibility.

- The chosen theme preference (Light Mode) is saved and persists across sessions or after restarting the device, ensuring a consistent user experience.

**Test Case 7: Switching Themes (Dark, Light, Device Theme)**

- Test Case Name: Verify Theme Switching

- Objective: To ensure that users can switch between dark, light, and device themes without issues.

- Preconditions: User is on the YouTube homepage or watching a video.

- Test Steps for each theme:

1. Open the settings menu.

2. Select the "Appearance" option.

3. Choose "Dark theme", "Light theme", or "Use device theme".

- Expected Results: The YouTube interface updates to reflect the selected theme immediately.