

## Assignment 1 Test Plan

### Part 1. Overall Test Plan Description

This test plan outlines the testing strategy for the Spotify Web App that enhances the group listening experience. The testing will be a combination of functional, integration, and performance testing to ensure that key features work correctly. Blackbox testing will be primarily used since the system interacts with Spotify's API. Testing will include normal, abnormal, and boundary cases to validate expected behaviors.

### Part 2: Test Case Descriptions

#### Test Case 1: Host Login with Spotify

- Test Case ID: TC01
- Purpose: Verify that a host can log in using their Spotify credentials.
- Description: The host attempts to log in through Spotify authentication.
- Inputs: Valid Spotify credentials.
- Expected Outputs: Successful login and redirection to the host dashboard.
- Classification: Normal / Blackbox / Functional / Unit

#### Test Case 2: Invalid Host Login Attempt

- Test Case ID: TC02
- Purpose: Verify system response to invalid login credentials.
- Description: The host enters incorrect credentials.
- Inputs: Invalid Spotify credentials.
- Expected Outputs: Error message and login failure.
- Classification: Abnormal / Blackbox / Functional / Unit

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### **Test Case 3: Creating a New Jam Session**

- Test Case ID: TC03
- Purpose: Ensure that the host can create a jam session.
- Description: The host starts a new session.
- Inputs: Host clicks "Start Jam".
- Expected Outputs: Jam session successfully created.
- Classification: Normal / Blackbox / Functional / Unit

### **Test Case 4: Guest Joining a Jam Session**

- Test Case ID: TC04
- Purpose: Validate that guests can join an ongoing Jam session.
- Description: A guest joins via Spotify.
- Inputs: Guest attempts to join a session.
- Expected Outputs: Guest is added to the session.
- Classification: Normal / Blackbox / Functional / Integration

### **Test Case 5: Song Queue Rotation**

- Test Case ID: TC05
- Purpose: Ensure fair rotation of songs between users.
- Description: Songs should play in a round-robin order per user.
- Inputs: Multiple users add songs.
- Expected Outputs: The queue alternates users correctly.
- Classification: Normal / Blackbox / Functional / Integration

### **Test Case 6: Host Overriding Queue**

- Test Case ID: TC06
- Purpose: Test host's ability to override the queue.
- Description: The host force-plays a song.
- Inputs: Host selects "Play Now".
- Expected Outputs: The selected song plays immediately, and the previous queue resumes afterward.
- Classification: Normal / Blackbox / Functional / Integration

### **Test Case 7: Guest Viewing Rotation Order & History**

- Test Case ID: TC07
- Purpose: Ensure guests can see the song rotation and history.
- Description: A guest accesses the session's track history.
- Inputs: Guest navigates to the history page.
- Expected Outputs: The history and rotation order display correctly.
- Classification: Normal / Blackbox / Functional / Unit

### **Test Case 8: Host Ending a Jam Session**

- Test Case ID: TC08
- Purpose: Verify that the host can end the session.
- Description: The host selects "End Jam".
- Inputs: Host clicks "End Jam".
- Expected Outputs: Session ends, and all users are removed.
- Classification: Normal / Blackbox / Functional / Unit

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### **Test Case 9: Saving a Jam Session Playlist**

- Test Case ID: TC09
- Purpose: Validate that users can save the session playlist.
- Description: The host or guest saves a playlist.
- Inputs: Clicks "Save Playlist".
- Expected Outputs: Playlist is saved to Spotify.
- Classification: Normal / Blackbox / Functional / Integration

### **Test Case 10: Performance Under Heavy Load**

- Test Case ID: TC10
- Purpose: Assess system performance with many users.
- Description: The system is tested with a large number of users.
- Inputs: Simulated traffic with multiple simultaneous users.
- Expected Outputs: The system remains responsive without crashing.
- Classification: Normal / Blackbox / Performance / Integration

### **Part III. Test Case Matrix: summarizes the test case coverage (items 1, 6-9 in a tabular format)**

<b>Test Case ID</b>	<b>Normal/ Abnormal</b>	<b>Blackbox/ Whitebox</b>	<b>Functional/ Performance</b>	<b>Unit/ Integration</b>
<b>TC01</b>	Normal	Blackbox	Functional	Unit
<b>TC02</b>	Abnormal	Blackbox	Functional	Unit
<b>TC03</b>	Normal	Blackbox	Functional	Unit
<b>TC04</b>	Normal	Blackbox	Functional	Integration
<b>TC05</b>	Normal	Blackbox	Functional	Integration
<b>TC06</b>	Normal	Blackbox	Functional	Integration
<b>TC07</b>	Normal	Blackbox	Functional	Unit
<b>TC08</b>	Normal	Blackbox	Functional	Unit
<b>TC09</b>	Normal	Blackbox	Functional	Integration
<b>TC10</b>	Normal	Blackbox	Performance	Integration