**Test Plan Document**

**Project Name: Sonic Sargam**

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**1. Introduction**

Sonic Sargam is a user-friendly music streaming platform designed to deliver an exceptional audio experience. The website allows users to explore, search, and play a wide variety of songs, albums, and podcasts with ease. Key features include a seamless audio player with functionalities like Play, Pause, Shuffle, and Volume adjustments, intuitive navigation across playlists and artists, and a responsive design optimized for desktop and mobile devices. With its engaging interface and smooth performance, Sonic Sargam ensures users enjoy their favorite tunes anytime, anywhere.

**Purpose:**  
This test Plan defines the scope, strategy, approach, and resources required to validate the **Sonic Sargam** website's functionalities. The main focus is to ensure the website delivers a smooth user experience, functional accuracy, performance efficiency, security compliance, and UI/UX consistency.

**2. Scope**

**In-Scope Testing**

1. **Functional Testing**
   * Audio Player Functionality:
     + Play, Pause, Stop, Seek Bar, Next, Previous, Shuffle, Volume Adjustments.
     + Track progress bar display (e.g., Start Time, End Time).
   * User Navigation:
     + Menu links: Playlist, Albums, Artists, Podcasts, Explore.
     + Navigation flow and redirection accuracy.
   * Search Functionality:
     + Search with valid inputs (songs, artists, genres).
     + Search with invalid inputs (non-existent queries).
   * Login/Logout:
     + Successful and unsuccessful login scenarios.
     + Logout button and session handling.
   * Like/Favorite Button:
     + Validation of interaction and feedback upon clicking.
2. **UI/UX Testing**
   * Layout consistency across devices (mobile, tablet, desktop).
   * Button placements, font sizes, and visibility.
   * Color scheme, alignment, and design usability.
   * Playlist grid view and Player component alignment.
3. **Performance Testing**
   * Page load time and speed under various networks (slow, fast).
   * Streaming audio without lag.
   * Response time for:
     + Search requests.
     + Clicking Play, Pause, or Skip buttons.
4. **Compatibility Testing**
   * Browser Compatibility: Chrome, Firefox, Edge, Safari.
   * Device Compatibility:
     + Windows, macOS, iOS, Android.
     + Mobile and tablet responsive behavior.
5. **Security Testing**
   * Login credentials validation (invalid username/password).
   * Session timeout behavior.
   * Logout security: Ensuring no access after logout.
6. **Usability Testing**
   * Intuitive user flow from landing page to music playback.
   * Ease of access to menus, albums, and playlists.

**3. Objectives**

* Verify that the **audio player works seamlessly** with core functionalities like Play, Pause, Seek, Volume, Shuffle.
* Ensure **responsive design** across devices and browsers.
* Validate **UI/UX elements** for consistency, alignment, and smooth navigation.
* Test **search functionality** to handle valid and invalid inputs gracefully.
* Check **login/logout security** and session management.
* Ensure that the **website performs well** under different network conditions.
* Identify and report bugs for resolution.

**4. Features to Be Tested**

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| --- | --- | --- |
| **Feature** | **Test Scenarios** | **Expected Results** |
| **Audio Player** | Play, Pause, Stop buttons. | Buttons should function as intended. |
|  | Volume adjustment slider. | Volume changes should reflect instantly. |
|  | Seek bar movement and time display. | Time progress reflects actual position. |
|  | Shuffle and Next/Previous buttons. | Tracks should change accordingly. |
| **Navigation** | Menu options: Playlist, Albums, Artists, Explore. | Redirection should work without errors. |
| **Search** | Valid search input (song/artist name). | Correct results displayed. |
|  | Invalid search input. | Show ‘No Results Found’ message. |
| **Login/Logout** | Successful login with valid credentials. | Redirect to dashboard. |
|  | Invalid login (incorrect credentials). | Error message displayed. |
|  | Logout session handling. | User redirected to Login page. |
| **UI/UX Testing** | Fonts, buttons, colors, and alignment. | All elements visually consistent. |
|  | Mobile responsiveness (small screens). | Layout adjusts without breakage. |
| **Performance Testing** | Page load speed (under 3 seconds). | Fast loading across all pages. |
|  | Audio streaming on slow networks. | No significant buffering delays. |

**5. Test Strategy**

**5.1 Test Types**

1. **Functional Testing**: Validate all core features of the website.
2. **UI/UX Testing**: Ensure visual appeal, usability, and consistency.
3. **Performance Testing**: Verify load times and streaming quality.
4. **Compatibility Testing**: Test across multiple browsers and devices.
5. **Security Testing**: Validate login security and session management.

**5.2 Test Environment**

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| --- | --- |
| **Component** | **Details** |
| **Browsers** | Chrome, Firefox, Edge, Safari |
| **Devices** | Windows, macOS, iOS, Android |
| **Tools** | Browser DevTools, Network Throttling |
| **Network Conditions** | 4G, Wi-Fi (Fast and Slow connections) |

**6. Test Schedule**

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| --- | --- | --- |
| **Day** | **Task** | **Start Date** |
| **Tuesday** | Functional Testing: Audio Player, Navigation. | 17-12-2024 |
| **Wednesday** | Search Functionality, Login/Logout Testing. | 18-12-2024 |
| **Thursday** | UI/UX Testing and Usability Testing. | 19-12-2024 |
| **Friday** | Performance Testing (Speed, Network). | 20-12-2024 |
| **Saturday** | Compatibility Testing (Browsers and Devices). | 21-12-2024 |

**7. Test Deliverables**

The following deliverables will be provided:

1. **Test Scenarios and Test Cases**: Documented step-by-step test scenarios.
2. **Bug Report**: A list of identified defects with severity, priority, and status.
3. **Test Execution Report**: Status of passed/failed test cases.
4. **Daily Updates**: Uploaded to GitHub repository.

**8. Defect Management**

* All identified defects will be logged and tracked in **GitHub Issues**.
* Defect Severity:
  + Critical: Blocks core features.
  + Major: Affects key features but has workarounds.
  + Minor: Visual or non-critical issues.

**9. Approval**

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| --- | --- | --- |
| Role | Name | Signature |
| Test Lead | Atul Pal |  |
| QA Manager | Anjali Shaw |  |
| Project Manager | Pooja Yadav |  |