**Functional Requirements Specification (FRS) – VLC Android App**

**1. Introduction**

**1.1 Purpose**

The purpose of this document is to define the functional and non-functional requirements of the VLC Android application. It serves as a reference for testers, developers, and stakeholders to ensure that the application meets expected functionality and quality standards.

**1.2 Scope**

VLC for Android is a free and open-source media player that supports various audio and video formats. The application allows users to play local media files, stream online content, and manage media libraries. This document outlines the core functionalities and expected behaviours of the app.

**1.3 Target Users**

* General users who want to play media files on their Android devices.
* Users who stream media from network sources.
* Power users who require advanced playback and customization features.

**1.4 Assumptions & Constraints**

* The application should function on Android 5.0 (Lollipop) and above.
* The device should have sufficient storage and processing power to handle media playback.
* Network streaming features depend on internet availability and network configuration.

**2. Functional Requirements**

**2.1 Media Playback**

* Play, pause, stop video and audio files.
* Seek forward and backward in media files.
* Adjust playback speed (slow motion, fast forward).
* Resume playback from the last position.
* Background playback support for audio files.

**2.2 File Management & Library**

* Scan and detect media files from device storage.
* Browse and open media files from different folders.
* Sort and filter media files (by name, size, date, etc.).
* Rename, delete, or move media files within the app.

**2.3 Subtitle & Audio Features**

* Enable/disable subtitles.
* Adjust subtitle synchronization.
* Select and switch audio tracks in multi-audio files.
* Load external subtitle files (SRT, SSA, etc.).

**2.4 Network Streaming & Playback**

* Play media from network streams (URL-based playback).
* Connect to and play from local network shares (FTP, SMB, etc.).
* Cast media to external devices (Chromecast, DLNA).

**2.5 UI/UX & Settings**

* Dark mode and UI customization options.
* Gesture controls (volume, brightness, seek).
* Equalizer and audio enhancement settings.
* Hardware acceleration settings.

**2.6 Performance & Stability**

* Fast app launch and smooth navigation.
* Optimized battery and RAM consumption.
* Stability during media playback (no crashes, lags, or freezes).

**2.7 Compatibility & Accessibility**

* Support for different Android versions (Android 5.0+).
* Functionality across various screen sizes (phone, tablet).
* Support for Bluetooth and external media controls.

**4. Dependencies & Constraints**

* The app requires permission to access device storage for media files.
* Network-dependent features require an active internet connection.
* Hardware acceleration may not work on all devices.

**5. Acceptance Criteria**

* The app should successfully play at least 95% of tested media formats.
* No major crashes should occur during 10 hours of continuous playback.
* All core functionalities should work without errors on at least 90% of tested Android devices.

This FRS serves as a foundational document for the VLC Android testing project. Next, we will create the **Test Plan** based on these requirements.