

# Software Requirements Specification (SRS) for StreamFlix [Example]

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## 1. Introduction

### 1.1 Document Purpose

This Software Requirements Specification (SRS) document defines the functional and non-functional requirements of the StreamFlix streaming platform. It is intended for software developers, testers, project managers, and stakeholders who will be involved in the design, development, and maintenance of the system.

### 1.2 Product Scope

StreamFlix is a subscription-based online streaming service that provides a vast library of movies, TV shows, and original content across various genres. The platform is accessible via web browsers, mobile apps, smart TVs, and gaming consoles. The primary goal of StreamFlix is to provide an intuitive, personalized, and high-quality streaming experience to users worldwide.

### 1.3 Document Overview

This document outlines the software requirements for StreamFlix, including an overview of the system, functional and non-functional requirements, and constraints. It is structured as follows:

- Section 2: Provides an overall description of StreamFlix, including its perspective, functions, user characteristics, constraints, and assumptions.
- Section 3: Details the specific requirements, including external interfaces, functional, and non-functional requirements.
- Section 4: Provides supporting information.

### 1.4 Definitions, Acronyms, and Abbreviations

- UI: User Interface
- API: Application Programming Interface
- OTT: Over-The-Top (streaming media service)
- CDN: Content Delivery Network

## 2. Overall Description

### 2.1 Product Perspective

StreamFlix is an OTT streaming service that provides on-demand video content to users. It integrates with various operating systems and devices, including iOS, Android, Windows, macOS, smart TVs, and gaming consoles. The system relies on a cloud-based infrastructure for content delivery, recommendation engines, and user data management.

## 2.2 Product Functions

StreamFlix provides the following core functionalities:

- User registration and profile creation
- Subscription management and billing
- Content browsing and search
- Personalized recommendations
- Video streaming in various resolutions (SD, HD, 4K)
- Downloading content for offline viewing
- Multi-device synchronization
- Parental controls
- Multi-profile support

## 2.3 User Characteristics

**General Users:** Individuals who subscribe to the service to stream content. They typically have basic to moderate technical proficiency and can navigate web and mobile applications with ease.

**Admin Users:** Content managers who upload and manage video content. They are expected to have a strong technical background in content management systems and media processing tools.

**Customer Support Agents:** Personnel who handle user inquiries and troubleshooting. They should have moderate technical proficiency, including familiarity with account management and common streaming issues.

**Advertisers:** Businesses that may integrate ads into the service. They generally have basic to moderate technical knowledge and interact with the system through advertiser dashboards and analytics tools

## 2.4 Constraints

- Must support major web browsers (Chrome, Firefox, Safari, Edge)
- Mobile app must be available for iOS (iOS 14+) and Android (Android 8+)
- Must comply with DRM and content licensing regulations
- Must support secure payment gateways for subscription handling
- Video streaming quality is subject to internet speed and device capability.

## 2.5 Assumptions and Dependencies

- Users must have a stable internet connection for streaming.
- The application will be available on web, mobile, and smart TV platforms.
- Payments will be processed through third-party payment gateways.
- Content will be delivered via a CDN to optimize performance.

### 3. Specific Requirements

#### 3.1 External Interfaces

- **User Interface:** Web-based platform, Mobile application (iOS & Android), Smart TV and gaming console support. [Not included in this document but should have the graphical representations of the GUIs included here]
- **Hardware Interfaces:** Compatible with devices supporting streaming (e.g., Smart TVs, Fire Stick, Roku, Chromecast).
- **Software Interfaces:** Integration with third-party payment providers (PayPal, Stripe, credit cards), Content delivery networks for optimized streaming.
- **Communication Interfaces:** Supports RESTful API for third-party integrations, Email and push notifications for user alerts.

#### 3.2 Functional Requirements

- **User Registration & Authentication:** Users must be able to create an account using email or third-party authentication (Google, Apple ID). Authentication must be secured using OAuth 2.0.
- **Content Browsing & Search:** Users must be able to browse content by genre, popularity, release year, and personalized recommendations. The search function must support keyword-based queries and filters.
- **Subscription & Billing Management:** Users must be able to select a subscription plan (Basic, Standard, Premium) and manage billing through credit/debit cards, PayPal, or digital wallets. Subscription payments will be processed via Stripe API, ensuring PCI-DSS compliance.
- **Video Playback & Streaming:** Users must be able to play, pause, rewind, fast-forward, and enable subtitles. The system must support adaptive bitrate streaming based on internet speed to ensure seamless playback.
- **Multi-Profile & Parental Controls:** Users must be able to create up to five profiles per account. Child profiles must have restricted content access based on parental control settings.
- **Content Recommendation System:** The system must provide personalized recommendations using machine learning algorithms that analyse user watch history, ratings, and preferences.
- **Multi-Device Synchronization:** Users should be able to resume watching across devices from where they left off. Progress tracking must be stored in real-time and synchronized across devices.

#### 3.3 Non-Functional Requirements

- **Performance:** The system should handle at least 100 million concurrent users.
- **Security:** User data must be encrypted using AES-256 encryption.
- **Availability:** The service should have an uptime of 99.9%.
- **Usability:**
  - The UI should follow accessibility standards (WCAG 2.1) to ensure usability for users with disabilities.

- The average user should be able to navigate key features (e.g., search, playback, and account management) within three clicks or less.

#### 4. Supporting Information

- System architecture diagrams: Not included in this document but should be part of the full technical specification. These could be things like: high-level system architecture diagram, deployment architecture diagram, sequence diagram for video playback & recommendation engine architecture
- Use cases, Use case diagrams
- API documentation (for third-party integrations).
- Legal compliance (DMCA, GDPR, and other regulatory considerations).
- References