



NetStreaming

Requirements Document



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1 Introduction

1.1 Purpose

The purpose of this document is to create an organized and detailed description of the requirements for an online video streaming service called NetStreaming. This document will be used to make sure that both the software agency and the client are on the same page to agree on the requirements of the projects. It will also be used as a guide for the software developers of this project which will be able to look at the requirements and create the streaming service accordingly. To sum up, this requirement document will create an outline of the project for both client and the software company.

1.2 Scope

The goal of this service is to create a collection of movies, series, TV-shows stored on a database that the viewers can look at from a website. This website needs to have a user-friendly interface, to make it easier for the users to have a good experience with online streaming. To be able to access all of the content, the users will need to pay a membership fee. Without paying none of the streaming services will be accessible. The user will be able to search content by categories such as movie, TV-show, series, but also with the genre such as comedy, drama, and many more. NetStreaming will also recommend content to the viewers to promote new movies or movies of interest. The viewers will also be able to download content to watch it when they do not have access to an internet connection.

1.3 Stakeholders

This section will list all of the stakeholders involved with a description of what role they play in this project

- **Viewers** - Any person that will use this service to watch movies, series, TV-shows. They will be considered the end-users.
- **NetStreaming Board** - The board of the company NetStreaming. It is the client and they will decide on the requirements of this project and update them depending on what they want the streaming service to do.
- **Film agencies** - They will be the ones that will supply the content of the streaming service.
- **Software Managers** - The software managers will decide which approach the developers should use to create this project. They will also distribute the work to each developer.

- **Software Developers** - They will be the one that creates this document and then will use it as a template to create the streaming service.
- **Maintenance Developers** - The maintenance developers will make sure that the layout of the system is easy to change and maintain in the future.

2 Overall description

2.1 Product perspective

This product aims at creating a video streaming service that displays movies, series, and TV-shows to anyone in search of it. Nowadays with the pandemic and the increase of internet access in the world, there is an increase in demand for entertainment. And this is what NetStreaming is aiming to do. This platform aims to create one place to find a big quantity of entertainment without having to search hours on the internet for content. It also aims to supply high definition content while making a fast and enjoyable experience for the viewers.

2.2 Product functions

Netstreaming will offer the following features to their customers:

- Account creation
- Search for movies, series, or TV-show by title.
- Filter the search of movies by genre (comedy, drama,...) or type (Film, series,...).
- Download content to watch offline.
- Add content to their List, to regroup and make it easier for them to find again movie/series.
- Create different profiles
- Get recommendations of movies depending on their previous searches.

2.3 User characteristics

There will be two intended users for NetStreaming. The first one is the viewers. The viewers will have different knowledge of the internet or even of streaming services. Therefore the website needs to be user-friendly to make it easy for them to use without needing previous knowledge about it. The viewers could also be coming from other video streaming services. Thus, the website will need to be efficient and fast to have the lowest loading times and work with the slowest internet connections.

The second intended users will be the NetStreaming developers. They will interact with the content of the website, making sure that all content is working as expected, adding new content to the platform. They will need to have this overview of the system.

2.4 Constraints

To be able to create NetStreaming some constraints will be taken into account:

- Accessibility of large video files over low internet speed.
- Storage of large files on databases
- GDPR
- Making sure that the viewers get the content they requested
- Account Security
- Capacity of the servers

2.5 Assumptions and dependencies

The assumptions for this project are that the database is fully implemented, the internet speed of viewers is stable and fast enough to allow them to watch content without packet loss, and that the server capacity is enough to support multiple connections to the website at the same time. No dependencies are needed for this project.

3 Requirements

3.1 Functional requirements

F.R.1 - Log in
DESCRIPTION: The system must provide some facility for authenticating users to the website.
INPUT: Request for email and password.
PROCESSING: Checks database for existing user and retrieve data.
OUTPUT: The system prompts the user a welcome message.
F.R.2 - Search by name
DESCRIPTION: The system must provide some facility for searching movies, series, TV-shows by name.
INPUT: Request a keyword from the viewer.
PROCESSING: Checks the database for content with the given keyword and retrieve corresponding data.
OUTPUT: The system shows all movies, series, TV-shows with the keyword in their title.
F.R.3 - Download content for offline use
DESCRIPTION: The system must provide a way to download content to be able to watch it without any internet connection.
INPUT: Viewers need to choose the content they want to download to be able to watch offline.
PROCESSING: Retrieve the content from the database and store it on the viewer's device.
OUTPUT: System prompt message saying that the content is being downloaded.

3.2 Non-functional requirements

3.2.1 Performance requirement

NFR 1 - authentication process: It should take less than 1 second for the viewer to be authenticated. Concerned Functional requirement: FR1

NFR 2 - query time: It should take less than 5 seconds to retrieve the list of movies when the viewer is searching for content by name. Concerned Functional requirement: FR2

3.2.2 Security requirements

NFR 3 - video encryption Videos should be encrypted when stored on the viewer's device. Concerned Functional requirement: FR3

3.3 Requirements Analysis

	FR1	FR2	FR3
Premature design	Yes	Yes	Yes
Combined requirement	No	No	No
Unnecessary requirements	No	No	No
Use of non-standard hardware	No	No	No
Conformance with business goals	Yes	Yes	Yes
Requirements ambiguity	No	No	No
Requirements realism	Yes	Yes	Yes
Requirements testability	Yes	Yes	Yes

3.4 Requirements Classification - faceted approach

	FR1	FR2	FR3
System	Yes	Yes	Yes
User Interface	Yes	Yes	Yes
Database	Yes	Yes	Yes
Security	Yes	No	Yes

3.5 Risk Assessment of requirements

	FR1	FR2	FR3
Performance risks	Low	Medium	Medium
Safety and security risks	Medium	Low	Medium
Process risks	Low	Medium	Low
Implement technology risks	Low	Low	Low
Database risks	Medium	Low	Medium
Schedule risks	Low	Low	Low
External risks	Low	Low	Low
Stability risks	Low	Medium	Medium

3.6 Systematic Validation

In this subsection, the requirement will be validated depending on the checklist below:

- C1: Are the requirements *complete*?
- C2: Are the requirements *consistent*?
- C3: Are the requirements *comprehensible*?
- C4: Are the requirements *ambiguous*?
- C5: Is the requirement document *structured*?

- C6: Are the requirements *traceable*?
- C7: Does the requirements document as a whole conform to defined *standards*?

ID	C1	C2	C3	C4	C5	C6	C7
FR1	✓	✓	✓	✗	✓	✗	✓
FR2	✓	✓	✓	✗	✓	✗	✓
FR3	✓	✓	✓	✗	✓	✗	✓

3.7 Test cases

TC1 - Log in

Requirement Tested: FR1

Type of testing: Manual testing

Description: This test case test if when the user enters the correct password and email, it is correctly logged into the website

Test steps:

- Open a browser and go to the website "www.netstreaming.com".
- Click on the Log In button.
- Enters password and email.
- Verify that viewer is Logged in and can access the content.

TC2 - Search by name

Requirement Tested: FR2

Prerequisite: FR1

Type of testing: Manual testing

Description: This test case will test if the user will get the correct collection of movies when searching by name.

Test steps:

- Input keyword to search for a movie.
- Check if the database is correctly retrieving data containing the keyword in the titles.
- Make sure that the system is correctly showing the result to the user.

TC3 - Download content for offline use
Requirement Tested: FR3 Prerequisite: FR1 Type of testing: Manual testing Description: This test case will check if the content is correctly downloaded and can be used offline. Test steps: <ul style="list-style-type: none">• Select the content that will be downloaded.• Click on the download button.• Checks that the download request has been received by the database.• Make sure that the content is being downloaded.• Check that the content has been downloaded fully.• Manually check that the content receive and the one on the database are the same.• Switch off any internet connection and test if the content can still be watched.