Requirements Document

Report

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Semester: VT21

Course code: 2DV608

Table of contents

[1 Introduction 3](#_Toc65704869)

[1.1 Purpose of the requirements document 3](#_Toc65704870)

[1.2 Scope of the product 4](#_Toc65704871)

[1.2.1 Stakeholders 4](#_Toc65704872)

[1.2.2 Requirements 5](#_Toc65704873)

[1.2.3 Requirements Analysis 6](#_Toc65704874)

[1.2.4 Requirements Classification 8](#_Toc65704875)

[1.2.5 Risk Assessment of Requirements 9](#_Toc65704876)

[1.2.6 Systematic Validation of Requirements 11](#_Toc65704877)

[1.2.7 Test Cases for Requirements 11](#_Toc65704878)

[1.3 Definitions, acronyms, and abbreviations 11](#_Toc65704879)

[1.4 References 11](#_Toc65704880)

[1.5 Overview of the document 11](#_Toc65704881)

Introduction

This requirements document is a report about designing and developing an online video streaming service for Netflix.

Purpose of the requirements document

The requirements document is an official statement of the system requirements for customers, end-users, and software developers.

How to use the requirements document as a target audience:

* System customers specify the requirements and read them to check that they meet their needs. Customers specify changes to the requirements.
* Managers use the requirements document to plan a bid for the system and to plan the system development process.
* System engineers use the requirements to understand what system is to be developed,
* System maintenance engineers use the requirements to understand the system and the relationships between its parts.
* System testers use the requirements to develop validation tests for the system.
* System end-users read the document to understand what the system provides and how the system works.

## Scope of the product

Stakeholders

* End-users of the system – users who use Netflix to watch videos.
* Managers and others involved in the organizational processes – product manager / development manager, legal and compliance teams.
* Engineers responsible for the system development and maintenance – software developers and testers.
* Customers of the organization who will use the system to provide some services.
* External bodies – regulators or safety certification authorities.

### Requirements

|  |  |  |  |
| --- | --- | --- | --- |
| Unique Identifier | Requirements | Type of Requirements | Priority |
|  | The system should enable the user to watch a video. | Functional | Essential |
|  | The system should enable the user to choose the quality of a video. | Functional | Useful |
|  | The system should enable the user to choose the playback speed of a video. | Functional | Useful |
|  | The system must provide some facility for authenticating the identity of a system user. | Functional | Essential |
|  | The authentication process should be completed in 5 seconds or less. | Non-functional | Useful |
|  | The system should enable to provide a section with only children-friendly videos. | Non-functional | Useful |
|  | The system should be easy to use. | Non-functional | Desirable |
|  | The system should be easy to search videos. | Non-functional | Desirable |

Essential – it **must** be **included** in the system.

Useful – the system will be **less** **effective** without it.

Desirable – it is **not** a **core** system facility but makes the system **more** **attractive** to users.

Functional requirements (FRs):

1. The system should enable the user to watch a video.
2. The system should enable the user to choose the quality of a video.
3. The system should enable the user to choose the playback speed of a video.
4. The system must provide some facility for authenticating the identity of s system user.

#### Non-functional requirements (NFRs):

1. The authentication process should be completed in 5 seconds or less.
2. The system should enable to provide a section with only children-friendly videos.
3. The system should be easy to use.
4. The system should be easy to search videos.

### Requirements Analysis

The following is a checklist for Requirements Analysis.

1. Premature Design – Does the requirements include **premature** design or implementation **information**?
2. Combined Requirements – Could the description of a requirement be **broken** **down** into several different requirements?
3. Unnecessary Requirements – Is the requirement ‘**gold** **plating’**? That is, a cosmetic addition to the system which is not really necessary.
4. Use of Non-standard Hardware – Does the requirement mean that **non**-**standard** hardware or software must be used?
5. Conformance with Business Goals – Is the requirement **consistent** with the business **goals** defined in the introduction to the requirements document?
6. Requirements Ambiguity – Is the requirement **ambiguous**, i.e., could it be read in different ways by different people?
7. Requirements Realism – Is the requirement **realistic** given the technology which will be used to implement the system?
8. Requirements Testability – Is the requirement **testable**, that is, is it stated in such a way that test engineers can derive a test which can show if the system meets that requirement?

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#### Premature design

The requirement “The authentication process should be completed in 5 seconds or less” includes implementation information.

#### Combined requirements

The requirement “The system should be easy to use” can be broken down into more detailed requirements.

#### Unnecessary requirements

There are no unnecessary requirements.

#### Conformance with business goals

The requirement “The system should enable the user to watch a video” is consistent with the business goal.

#### Requirements ambiguity

The requirement “The system should be easy to use” and “The system should be easy to search videos” are ambiguous, so they need to be modified.

#### Requirements realism

The requirements are realistic for implementation.

#### Requirements testability

Some of the requirements are testable, especially the requirements “The system must provide some facility for authenticating the identity of s system user” and “The authentication process should be completed in 5 seconds or less” can be tested to show the system meets these requirements.

### Requirements Classification

|  |  |  |
| --- | --- | --- |
| Requirements | Priority | Classification |
| The system should enable the user to watch a video. | Essential |  |
| The system should enable the user to choose the quality of a video. | Useful |  |
| The system should enable the user to choose the playback speed of a video. | Useful |  |
| The system must provide some facility for authenticating the identity of a system user. | Essential |  |
| The authentication process should be completed in 5 seconds or less. | Useful |  |
| The system should enable to provide a section with only children-friendly videos. | Useful |  |
| The system should be easy to use. | Desirable |  |
| The system should be easy to search videos. | Desirable |  |

Priority:

Essential – it **must** be **included** in the system.

Useful – the system will be **less** **effective** without it.

Desirable – it is **not** a **core** system facility but makes the system **more** **attractive** to users.

Classification:

System – Requirements that affect the entire system such as performance or reliability requirements.

User Interface – Requirements that are concerned with user interaction.

Database – Requirements that are concerned with the data managed by the system.

Communications – Requirements that are concerned with the external communication facilities in the system.

Security – Requirements that are concerned with the security of the system or the user.

### Risk Assessment of Requirements

Performance Risks – May affect the overall performance of the system.

Safety and Security Risks – May cause problems in meeting overall system requirements for safety and security.

Process Risks – May require changes to the normal development process.

Implementation Technology Risks – May require the use of unfamiliar implementation technology.

Database Risks – May involve non-standard data which is not available in an existing system database.

Schedule Risks – May be technically difficult and may threaten the planned development schedule for the system.

External Risks – Involves external contractors.

Stability Risks – Requirement may be volatile and subject to evolution during the development process.

#### Requirement 2: The system should enable the user to choose the quality of a video.

This requirement may cause medium performance risk as when the user changes the quality, the system does not respond well. It can also be stability risk if the system loads for too long time.

#### Requirement 3: The system should enable the user to choose the playback speed of a video.

This requirement may cause medium performance risk as when the user changes the playback speed, the system does not respond well. It can also be stability risk if the system loads for too long time.

#### Requirement 4: The system must provide some facility for authenticating the identity of s system user. Requirement 5: The authentication process should be completed in 5 seconds or less.

These two requirements may have low process risk or implementation technology risk, because it asks the system to process a function within a certain time.

#### Requirement 6: The system should enable to provide a section with only children-friendly videos.

This requirement may have high performance risk, process risk and implementation technology risk, because it needs to be taken carefully as how to keep the system functional as well as the correct videos are selected.

#### Requirement 8: The system should be easy to search videos.

This requirement may have medium performance risk, process risk and implementation technology risk, because it needs to search the correct video for the user and loads it for the user.

### Systematic Validation of Requirements

A careful check of the requirements for consistency/completeness.

### Test Cases for Requirements

## Definitions, acronyms, and abbreviations

* Functional requirements = FRs
* Non-functional requirements = NFRs

## References

* Sommerville.I, Sawyer.P, “Requirements Engineering – A Good Practice Guide”
* Lectures from 2DV608 in Linneaus University

## Overview of the document

Netflix should let end-users be able to watch online videos with navigation searching tool and categorizes sections. Videos should have qualities, playback speed and subtitle for users to choose. Netflix system should also provide a special mode for only providing children-friendly videos for the user who has kid. To be able to use Netflix, user needs to become a member and pays the membership monthly.