# Graphic Era (Deemed to be University), Dehradun

**Title:** Development of Netﬂix Clone Web App using React and Firebase

**Name of the Student:** Tanishk Saini

**Project Supervisor: -**

**University Roll No.:** 2017086

**Branch:** Computer Science and Engineering

**Batch:** 2020-2024

**Contact no.:** +91-7300191973

**email id.:** [contact.tanishk@gmail.com](mailto:contact.tanishk@gmail.com)

**Project so far:** [https://netﬂix-clone-aeeb8.web.app/](https://netflix-clone-aeeb8.web.app/)

# Introduction

Netﬂix is a well-known name in the entertainment industry, providing an online streaming platform for movies, TV shows, documentaries, and more. With the advancement of technology, Netﬂix has become a preferred choice for many viewers worldwide who look for entertainment on the go. As technology has evolved, the way people consume media has also changed, and Netﬂix is at the forefront of this change.

The aim of this project is to develop a Netﬂix clone web application that can replicate the functionalities of Netﬂix's original platform. This application is created using ReactJS and Google Firebase, which are modern technologies known for their scalability and reliability.

The project has been designed to provide a user-friendly and responsive UI that will allow users to easily navigate through the application and watch trailers of their favourite movies. The clone app has all the basic features of Netﬂix, such as sign-in/sign-up, a home page with different categories, a search bar to ﬁnd movies, a watchlist, and a responsive video player.

The report provides an overview of the Netﬂix clone application and its

development process. The report discusses the feasibility study, methodology, and tools used for the project's development. The report also includes the challenges faced during the development process and how they were

addressed.

The report concludes by summarising the project's objectives, the outcome achieved, and the future scope of the project. This project aims to provide an alternative to Netﬂix and can be further enhanced to cater to a large audience with additional features.

# Feasibility Study

The feasibility study of this project is a crucial aspect of project development. It is used to determine the viability of an idea and is conducted to ensure that the project is legally and technically feasible and economically justiﬁable.

The project's feasibility was assessed in terms of technical feasibility, operational feasibility, and economic feasibility. Technical feasibility was assessed by evaluating whether the project's design and development are achievable using the selected technologies. Operational feasibility was evaluated by assessing the usability of the application and the availability of resources. Economic feasibility was assessed by evaluating the project's cost-beneﬁt analysis.

The technical feasibility of the project was evaluated by analysing the project's scope, timeline, and technological requirements. ReactJS and Google Firebase were selected as the primary technologies for developing the Netﬂix clone application. Both these technologies are known for their scalability and

reliability, making them an ideal choice for the project. The team also evaluated the availability of skilled developers and found that there are enough resources available to complete the project within the required timeline.

The operational feasibility of the project was evaluated by analysing the usability of the application and its availability to users. The team ensured that the user interface is user-friendly and responsive, making it easy for users to

navigate through the application. The application has also been designed to be accessible to users across different devices and platforms.

The economic feasibility of the project was assessed by analysing the cost-beneﬁt analysis. The project's cost was evaluated in terms of the development cost and the operational cost. The development cost was evaluated by analysing the cost of hiring skilled developers, the cost of

technology, and the cost of infrastructure. The operational cost was evaluated by analysing the cost of hosting the application and the cost of maintenance.

The team found that the beneﬁts of the project, such as increased user

engagement, outweighed the costs, making it economically feasible.

In conclusion, the feasibility study shows that the Netﬂix clone application is

technically feasible, operationally feasible, and economically feasible. The study has helped the team to understand the project's scope, limitations, and

requirements, and has ensured that the project can be completed successfully.

**Methodology/Planning of Work**

The project aims to create a Netﬂix clone web application using React and Google Firebase. The project is divided into different phases, which are as follows:

1. Requirement Gathering: The ﬁrst phase is to gather requirements for the project. It includes identifying the objectives of the project, the

functionalities to be included, the user interface design, and the technical feasibility of the project.

1. Design: The second phase is to create the design of the web application. It includes creating wireframes, user interface design, and the database schema. The design will be created using tools such as Figma or Adobe XD.
2. Development: The third phase is to develop the web application. The development will be done using React, which is a popular front-end

framework. Google Firebase will be used to store and manage the data of the web application. The development will be done using agile methodology, which involves iterative development and continuous

feedback from the client.

1. Testing: The fourth phase is to test the web application. Different types of testing such as functional testing, integration testing, and user acceptance testing will be performed. The testing will be done using tools such as Jest and Enzyme.
2. Deployment: The ﬁnal phase is to deploy the web application. The web application will be hosted on a cloud platform such as AWS or Google

Cloud Platform. The deployment will be done using tools such as Jenkins or GitLab.

The above phases will be executed in an iterative manner to ensure that the project meets the client's requirements and is delivered on time.

Communication will be maintained with the client throughout the project, and

feedback will be incorporated into the development process. The project plan will be reviewed and updated at regular intervals to ensure that the project stays on track.

**Tools Required for proposed work**

The tools required for the development of the Netﬂix Clone Web App included:

* React
* Firebase Authentication
* Firebase Realtime Database
* Firebase Storage
* Visual Studio Code
* Git

# Bibliography

* React documentation (<https://reactjs.org/docs/>)
* Firebase documentation ([https://ﬁrebase.google.com/docs](https://firebase.google.com/docs))
* Stack Overﬂow ([https://stackoverﬂow.com/](https://stackoverflow.com/))
* W3Schools (<https://www.w3schools.com/>)