**HACETTEPE UNIVERSITY**
**COMPUTER ENGINEERING DEPARTMENT**

# UNDERGRADUATE PROJECT PROGRESS REPORT

| Project Name | Report Date |
|---|---|
| Keyword-based Movie Suggestion and Rating Application | |

| Student Number(s) | Student Name(s) |
|---|---|
| 21627543<br>21626901<br>21627802 | Ece OMURTAY<br>Deniz Ece AKTAŞ<br>Ömer Bilal YAY |
| **Supervisor(s)** | **Company Representative(s)** |
| Murat AYDOS | |

| Project Coordinator | Report Approval |
|---|---|
| Date: _____ | ☐ Yes ☐ No<br>If no, rational of rejection: _____ |

# A. TECHNICAL PROGRESS

## I. INTRODUCTION

We are trying  to develop a web application where movie search and rating is the main attribute, this product will use datababes and APIs to get the movies and the web application will have rating system where the user will rate the movies, will be able to see where to reach the movie and will be able to search movies with specific keywords like ”war movies” etc.

## II. ARCHITECTURAL GOALS

The basic features we are trying to develop are; registering into the system; searching movies, rating the movies, being able to see where to watch the movie. The search system we are planning to implement searches the movies from their names, categories, actors/ actresses and their specific attributes. The users will be able to rate the movies not only overall but also they can give particular ratings such as actor/actresses points, scenario points etc. Also the user can see where to watch the movie for example; this movie can be watched on Netflix etc.

We are using ReactJS, NodeJS and visual studio to develop our website and for the dataset we are using SQL and API’s from open data sources such as open movie database API and IMDB API. We are using Javascript as our programming language.

We are using waterfall model which is a sequential life cycle model is a model that separates the work load into phases. These phases are; requirement gathering and analysis which researches the possible necessities for the system to be developed, we are all working on this as a team. System design is the second step and in this step systems overall architecture is decided and again we all work in this step as a team. Implementation is the third step this step will be all throughout development until the end. Integration and testing will be done by developers also and will go all throughout development as improvements are made we are planning to keep testing the system. Deployment is the step in which in the last week with our presentations we will give our systems to Tas. Maintenance step is to keep the system updated

We are currently on the implentation step of the waterfall model.

## III. ASSUMPTIONS AND DEPENDENCIES

Like we stated in previous section we are using our own computers so we are limited to the software systems that our computer works on and because our project is not supported by a company we don’t have a budget so we can only use student packages of programs or free programs.

Also because we are implementing this project remotely the communication is a big problem because of this sometimes we have to re-do some steps so we are dependent on each other.

## IV. DECISIONS, CONSTRAINTS, AND JUSTIFICATIONS

To handle software issues, we are using free or student versions of programs and to handle hardware issues we are finding some solutions like ubuntu application or memory cloud systems. To acquire the API’s we are promising to API owner that we will only use it for educational purposes and not commercial use.

## V. ARCHITECTURAL MECHANISMS AND KEY ABSTRACTIONS

**Architectural Mechanism 1** As the first step we researched and designed the web application we are developing.

**Architectural Mechanism 2** Then we researched the development process, the necessary steps and acquired the datasets we are using.

**Architectural Mechanism 3** Afterwards we started the development process by coding on Visual Studio with ReactJS and NodeJS.

**Keywords:** Data management, web application development, full-stack development

## VI. LAYERS OF ARHITECTURAL FRAMEWORK

After we finish the development process we are planning to test the functions of the web application and make sure that the application works correctly.

# B. PROJECT PROGRESS

## I. CHANGES TO PROJECT PLAN

The change we made is; we had to delay development and coding part of the project for one month because the website implementation and data collecting researches parts took more time than anticipated.

## II. PROGRESS OF PROJECT MILESTONES AND OBJECTIVES

| Milestone # | Primary Objective | Due Date | Project Deliverable (if any) | Milestone Achieved? |
|---|---|---|---|---|
| 1. | Project Proposal Report Delivery | March 2021 | Project proposal reports will be submitted. | Yes |
| 2. | To collect the dataset that will be used and do market research. | March 2021 | The dataset that will be used will be available | Yes |
| 3. | Research about web application methods like ReactJS and NodeJS and starting the development process. | March 2021 | Coding process will start. | Yes |
| 4. | Project process evaluation and project process report delivery | April 2021 | Project process reports will be submitted. | Yes |
| 5. | Tests on the developed application will be done and also optimizations will be made. | May 2021 | Optimized result is acquired. | Not yet |
| 6. | Final project delivery and presentations | June 2021 | Final project reports and presentations will be delivered. | Not yet |

## III. PROGRESS OF PROJECT PRACTICES AND MEASURES

| Task # | Task Description | Responsibility | Start Date | Finish Date | Success Criteria | Task Succeeded? |
|---|---|---|---|---|---|---|
| 1. | Do market research. | Ece Omurtay<br>Deniz Ece Aktaş<br>Ömer Bilal Yay | March 2021 | March 2021 | Having unique features. | Yes |
| 2. | To collect the dataset that will be used. | Ömer Bilal Yay | March 2021 | April 2021 | Having a database that is versatile. | Yes |
| 3. | Research about web application methods like ReactJS and NodeJS. | Ece Omurtay<br>Deniz Ece Aktaş | March 2021 | April 2021 | Learning how to use necessary software for the development. | Yes |

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| 4. | The development of the application. | Ece Omurtay<br>Deniz Ece Aktaş<br>Ömer Bilal Yay | March 2021 | May 2021 | Having a working website. | Not yet |
| 5. | Tests on the developed application will be done and also optimizations will be made. | Ece Omurtay<br>Deniz Ece Aktaş<br>Ömer Bilal Yay | May 2021 | June 2021 | Optimized application is developed. | Not yet |

| Team Member | Task # Under Responsibility | Description of the Work Done |
|---|---|---|
| Ece Omurtay | 1, 3, 4, 5 | Did research on the market of movie rating websites and looked for similar applications. Based on the project's requirements; searched dataset examples, researched necessary software such as ReactJS and NodeJS. Learnt how to work on fullstack development. Started to write the coding portion of the project and connected API's used to application. |
| Deniz Ece Aktaş | 1, 3, 4, 5 | Did research on the market of movie rating websites and looked for similar applications. Based on the project's requirements; searched dataset examples, researched necessary software such as ReactJS and NodeJS. Learnt how to work on fullstack development. Helped with the coding and implementation process. |
| Ömer Bilal Yay | 1, 2, 4, 5 | Did research on the market of movie rating websites and looked for similar applications. Based on the project's requirements; searched dataset examples and connected to the movie databased websites and acquired some API examples to be used on the application. Helped with the implementation of the web application. |

## IV. PROGRESS OF PROJECT BUDGET

We are using our own computers that we have and as for software we are using Visual Studio, ReactJS, Google Docs and SQL but we are using the student packets or community editions of these softwares so we will not be doing any expenses and also because of the COVID-19 pandemic we are going to be working remotely so we will not be having any commuting expenses. As for income we don't have any income that is related to design project.

## V. PROGRESS OF PROJECT RISKS

| Risk Item # | Description | Probability | Effect | Did It Happen? | How did you (or will you) handle its occurrence? (Plan-B) |
|---|---|---|---|---|---|

| | | | | | |
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| 1. | If we aren't able to get a strong dataset which contains a good mount of movie options the suggestions may seem not efficient. | Possible | Users wouldn't use the web applicatio n. | Not Yet | When we are programming, we used multiple API's to get as much value as possible from the variables we need and also we are expanding the dataset as the application is developing. |
| 2. | If we couldn't finish the application on time, we can't host the application on a server. | Possible | Users wouldn't be able use the web applicatio n. | Not Yet | We are following our project plan so we can finish the project on time. |

## VI. PROGRESS OF RESEARCH AND DEVELOPMENT (R&D) ACHIEVEMENTS

The innovative feature we are trying to develop is that the search system of our application should be able to search movies with specific keywords rather than only the name of the movie like "movies with reference to video games"etc. For this to work we are trying to expand the datasets we are using.

We are using ReactJS, NodeJS and visual studio to develop our website and for the dataset we are using SQL and API's from open data sources. As a result of our research we acquired IMDB API and Open MovieDatabase's API and we are working on these datasets. We are using use Javascript as our programming language.

## VII. OVERALL PROGRESS OF YOUR PROJECT

Overall, we are learning a lot of stuff about web application development, coding, frontend, backend and database management etc. especially with ReactJS and SQL and API's we had zero experience but after website development we understand this area much better but because of all of our other school work we take a little more time to archive our goals.