INTERNSHIP PROJECT

@KinoKlik

January 3rd - March 3rd, 2023

Submitted to:

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John Abbott College – March 11th, 2023

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Full Stack Development (fsd-02) - 2023

ABSTRACT (or Summary)

This report explains the internship project I have done in the Full Stack Development Program (fsd-02) at John Abbott College school of continuing education. The internship project was done at "KinoKlik", a company that promotes movies through a commercial website. My objective was to work on the back-end and front-end of their website. My plan was to understand the projects' pre-requisites, the owner's needs, and to start implementing the back-end and front-end phases. The project was implemented using the MERN (MongoDb, Express, REACT, and Node.js) stack. In collaboration with a group of my college classmates, I did a study of the models and the "Reset/Forget password" in the back-end. As to the front-end, I finished the unlogged Homepage (including 8 components), the Footer, and the first component of the logged-in Homepage of the company's website. This internship gave me a great experience as a back-end programmer; and more specifically as a front-end developer. In the nine-week "stage" duration, I have implemented what I have learned at college, and I have learned and enjoyed styling the front-end pages with "Tailwind CSS" inline styling. My recommendations for a Full Stack project to be successful is to do careful planning and design, and use the right technologies to implement a user-friendly website.

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I.   INTRODUCTION

As a full-stack developer, I had the opportunity to work on both the front-end and back-end of a web application. This internship project provided me with hands-on experience in building web applications and implementing data storage solutions (Amazon Web Services).

Over the course of the internship, I have worked on a real-world project that challenged me to apply my skills and learn new ones. I worked closely with my college colleagues to understand the projects requirements and to start implementing them. We had no technical mentor, and although we have faced some difficulties, we collaborated and did research to overcome them.

By the end of the project, I have gained more experience in which I can elaborate more easily now to future potential employers, as well as a deeper understanding of what it takes to be a successful full-stack developer. Let me explain to you how the work was done and what I have accomplished!

II.   THE COMPANY'S OVERVIEW

KinoKlik is a start-up small company. It is a Canadian Video On Demand (VOD) film marketing & streaming platform. Their mission is to serve the unserved Canadian film market by helping Canadian filmmakers to sell and market their feature films, short films and we series directly to their fans, audience and network. They also aim to assist filmmakers with marketing and strategic partnerships to increase awareness of their films and maximize revenue.

The main company crew are:

- The product manager, "Alberto Tihan", who is also a website designer, and the company's owner
- A technical lead and mentor
- Full Stack intern students (including me) doing their best to make a nice looking functional website!

III.   LEARNING OBJECTIVES

The learning objectives that I have set at the beginning of the training period were to be able work on the back-end side of the web project, to integrate it with the front-end, and to work on the front-end pages. I expected that the mentor will help us and give us hints, which did not happen. So, I depended on YouTube tutorials and some resources (mentioned in part XIII of this report) to learn on my own. With trial and error, and with collaboration with our colleagues, I could do a part of the back-end and a good part in the front-end. I say that I am happy with what I have learned here!

IV.   DAY-TO-DAY ACTIVITIES

The job was remote. It started 9 a.m. Monday to Friday, with daily meetings at noon. During the daily meetings, we presented what we have worked on the previous day. After that, we had lunch breaks. I would either continue working directly after the break, or in most cases, continue my tasks in the evenings. I was working 6 to 8 hours a day with few hours during the week-ends too. Flexible working hours was a remarkable advantage in my stage.

We were communicating through GMAIL, and our SCRUM meetings were done through Google meet. We shared resources through "slack" and our tasks were organized in a "Trello" board.

Slack   Trello
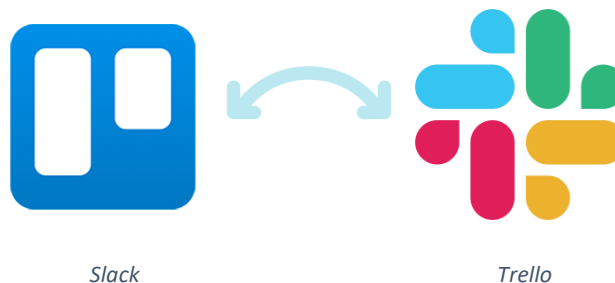
V. MY ASSIGNMENTS

To start with, after studying the back-end of the project, I proposed to add the Forget/Reset Password feature, and I implemented it.

Later, our Product Manger delegated the task of working on the Homepage components to me. I had curiosity to learn "Tailwind CSS". I did learn it and styled my components with it. What I like about it is its practical aspect of in-line styling of the HTML elements. Examples of the styling that I did was to play with the SVG icons opacity. Other examples were overlaying pictures above each other and having pictures to be half hidden or overlayed to the next component with two different backgrounds. I also did some picture animations in the front-end too.

Moving to the logged-in Homepage, after styling it as in the figma design, I had to fetch data from the back-end like images and titles. I did my job!

Whenever I finished some work, I pushed the code to my branch. After a major task was finished, I made "pull requests" to the main GitHub branch. All my work was merged to the main branch.

VI. THEORETICAL KNOWLEDGE GAINED AT JOHN-ABBOTT

In general, all the courses that I have learned at John Abbott College were precious and beneficial. In particular, the programming skills and logic, database concepts, web-design, HTML, CSS, JavaScript, version control (GIT), postman, and REACT.

This internship has reinforced my practical knowledge of the MERN stack web development technology, the Agile methodology and the version control (Git) technology.

I have a great appreciation for all the courses that you have taught me. If more hours, on the other hand, were dedicated to learn JavaScript (in which we did not have enough practice), cloud technologies like Azure Web Services, and getting more practical with Git, it would be more helpful, in my opinion in the job field. Our group (fsd-02) did not learn Node.js unfortunately.

VII.   NON-PROGRAMMING BENEFITS

During this internship, I have obtained such as greater self-confidence, better-defined career objectives, and a better understanding of business organizations.

VIII.   INTERNSHIP SKILLS

During this internship in full stack development, I brought my technical and non-technical skills to it and gained new skills from it as well.

A. Skills I Brought to the Internship

The skills that I have gained throughout the Full Stack Development Program are programming, problem solving, HTML, CSS, JavaScript, web development framework (REACT), and No-SQL Database MongoDB. I had humble knowledge of version control (GIT) and the Agile method. I used all this knowledge in my internship project.

Some of the non-technical skills I brought are my attention to detail, my collaboration and communication skills.

B. Skills I Gained from the Internship

a) Programming Experience

My work experience here helped me to gain more experience in HTML, CSS, JavaScript, and Node.js. I have learned Tailwind inline styling which I found more practical than normal CSS. I have done some front-end animation and responsive components.

b) Web Development Frameworks

I have gained interesting and precious experience in the REACT framework, which has component-based architecture, virtual DOM, one-way data flow and which is cross-platform compatible. Its concept helps to break down complex user interfaces into smaller re-usable components, which help to develop and maintain large applications.

c) Database Management

For our project, we used MongoDB No-SQL database that is a fit for our application. It has the ability of handling large amounts of data with flexible data models, scalability (ability to handle increased traffic and data volume), high performance, and easy integration .

The database that was handed to us was not normalized with over 20 models having redundant data. After studying the client's requirements, we transformed them to four models. The website UI designer was continuously adding fields to the figma designs, which was handled in fields added to the models in the MongoDB.

d) Version Control

We used the Git tool for version control in our project to manage the source code, track changes, and collaborate with team members. We used Git to commit changes, add files, create branches to work on different features or versions of the code. Git made it easy to collaborate with team members on our project, to share our code with others, review changes, and resolve conflicts using pull requests or merge requests. Overall, I have more experience with Git now.

e) Agile Development

We were abiding by the Agile rules and methodology. The product manager, who is a User Interface designer, gave us the figma designs of the website that he wanted us to implement. We had a Trello board for the project's tasks. For the confidentiality of the internship data, please find below an example of the Trello task board that we were using.
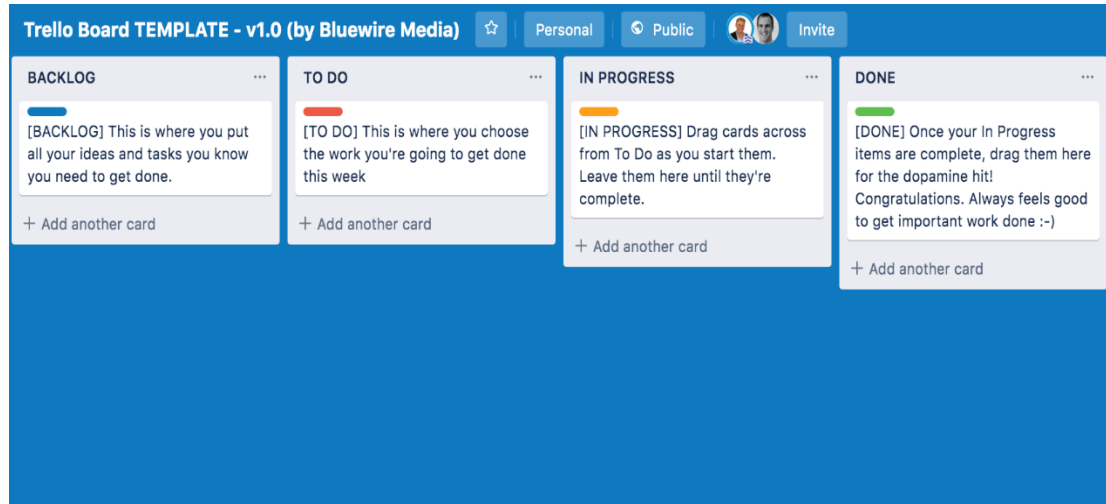

Figure 1: boyinyouxi.com

Daily meetings were held every day at noon, so that we could discuss the project, show what we have done, solve our challenges, and help each other. Technically, our mentor was not very supportive. We had colleagues with previous experience with Git who helped us to be more familiar with it. Our "Pull Requests" were confirmed and accepted by our colleagues and conflicts were solved by us.

I say that I am satisfied with what I have learned and practiced in the Agile development that we have followed.

C. Where can I go from here?

I need to keep practicing and adding more MERN stack projects to my portfolio so that hopefully I will have a job in this field. I have more experience and self-confidence now!

IX.   CHALLENGES

Our mentor was not always available for help. The project was started by other software development interns. Our challenge was to understand what they have implemented. To start with, they had more than 20 models in the back-end, which through research and meetings with the Project Manager, we transformed them to four.

During the course of the project, one of my tasks was to make some already made components to be responsive. The challenge was to understand the source of the effecting styles. Changing some styles in some pages was also affecting other pages. I tried to fix the issue with bootstrap and Material-UI, but it was still difficult to be resolved. Till I studied the front-page in-line styling: "Tailwind CSS".

Another challenge was that the UI designs were sometimes changed. But, in all, that was a good experience.

X.   CONCLUSION

I have had a very good experience during this internship project that lasted more than 270 hours. It started on January the 3rd, 2023 and ended on March the 3rd, 2023. The first two weeks were dedicated to review the React and Node.js concepts and to understand the project overview. During the remaining seven weeks, I was handling tasks mainly in the front-end implementation. In addition to understanding the project's back-end and doing the Forget/Reset password in it, I did around 10 responsive components for the Homepage. I had challenging designs to work on. In addition, I performed front-end image animations. It was a very good opportunity for me to learn "Tailwind" custom style sheets.

The daily Scrum meetings and the Trello board we used to manage the tasks gave me a good experience in the Agile methodology.

My internship helped me to grow as a Full Stack developer. I have acquired precious technical and non-technical skills. I have more confidence now to work as a front-end developer.

I thank my professors and colleagues for helping me in this condensed program. Thanks to our internship supervisor, Dr. Gregory Prokopsky. Special thanks to our program coordinator, Mrs. Julia Marcellus, for all her support.

I thank my supervisor, Mr. Alberto Tihan, at KinoKlik for giving me challenging figma designs that made me gain very interesting experience.

My future goals are to continue to acquire more experience in the REACT framework and Node.js and to become a senior Full Stack Developer in few years.

XI.   RECOMMENDATIONS

Our introduction to the company and its web project was kind of complicated. We were put in the middle of the figma designs and the previous website started by other web programmers, with a database having over 20 complicated model names. I recommend that introducing future trainees can be made simpler, having more information added little by little every day so that interns will understand the concept and overview of the company.

We did not have clear project analysis to start with. For that reason, we had to work backwards in some cases to modify the back-end models. I recommend that a detailed project analysis and design can be written to keep the concepts and the clients demands and expectations clear.

Our job did not include code testing. Another recommendation is to dedicate time for that at the end of the internship period.

XII.   LEARNING RESOURCES & TUTORIALS

My main **learning resources** were:

- REACT: React – A JavaScript library for building user interfaces (reactjs.org)
- Tailwind: https://tailwindcss.com/
- Node.js: https://nodejs.org

I have studied a variety of **tutorials**; the main ones are the following:

- MongoDB: https://www.mongodb.com/languages/mern-stack-tutorial
- MERN Stack: https://youtu.be/K8YELRmUb5o

    https://www.youtube.com/watch?v=mrHNSanmqQ4

- Mongoose: https://www.youtube.com/watch?v=DZBGEVgL2eE

- Redux Tutorials: https://www.youtube.com/watch?v=zrs7u6bdbUw

  https://www.youtube.com/watch?v=_shA5Xwe8_4

- Bootstrap: Bootstrap 5 Crash Course | Website Build & Deploy - YouTube

  Bootstrap CSS Framework - Full Course for Beginners - YouTube

- Material-UI MUI: Material UI React Tutorial - YouTube

- Tailwind CSS: Tailwind Crash Course | Project From Scratch - YouTube

  Tailwind CSS Crash Course - YouTube

  Your First Tailwind Website - YouTube

  React JS & Tailwind CSS Responsive Website - Beginner Friendly - YouTube

  Should You Use Tailwind CSS? - YouTube

XIII.   APPENDIX

This report respects the confidentiality of Kinoklik. All included information and images regarding the company hosting the internship are taken from the Kinoklik public social media websites:

www.kinoklik.ca

www.facebook.com/kinoklikcanada/

www.instagram.com/kinoklik/

www.linkedin.com/company/kinoklik/