CMPT 276 Proposal

Section: D100

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Github: https://github.com/ChrisFong604/BGCWorkloadManagementSystem

What is the name of your web application?

BGC Workload Management System

Project Abstract - BGC Workload Management System

The goal of this project is to develop a web application that manages the planned and actual work capacity of BGC Engineering's various Software Development teams, and compare them to the planned workload. Login will take place using the Microsoft Azure Active Directory API to ensure confidentiality. On our application, users will have access to a headcount graph which will show both a projected and employed headcount for BGC to see how they are doing in terms of hiring. There will also be a working capacity graph which will show work capacity vs workload to determine BGC's hiring needs. Users will be able to create, delete, and edit both project and employee information to adjust the graphs as needed. We are seeking to improve upon the previous implementation of a "large and hard to maintain" excel document by creating a more organized, intuitive, and less cluttered application.

Do we have a clear understanding of the problem?

The current solution for the purpose of workload management is implemented in an excel spreadsheet. But as the data grew in size, our employer stated that the spreadsheet became difficult to maintain. It can be hard to imagine having to search through hundreds of rows to find a specific name or piece of information. Our goal is to solve these grievances that our client had with the previous implementation through developing a more organized, convenient, and intuitive web application. This application will increase the ease of access for information through the use of databases and

dedicated input forms (No more finding an empty row in the spreadsheet). We also aim to provide more statistical insights and new perspectives by visualizing the data relationships through various graph representations. Lastly, the web application will feature a far more clean and intuitive interface, making it far simpler to CRUD information. The aim of this project is to improve the work efficiency for the project management team at BGC Engineering by optimizing their workload management system, and eliminate the impediments from the previous iteration.

What is the scope of your project?

The scope of our project will have one main focus to begin with, which will be implementing an active and planned employee headcount graph and a workload versus work capacity graph. Along with the two graphs, there will be an option to CRUD projects, as well as view an existing list of projects. Naturally, the edits and additions to the projects will be reflected in the workload and work capacity graph. There will also be an option to CRUD employees, and to view an existing list of employees. There will also be a visualization of when employees start on the same page where existing employees can be seen. When a user visits the application, they will be able to view a comprehensive representation of all the information in the database. For example, hovering over an area of a graph will show them additional details such as which employees joined at the respective date. Given the core focus of the project, as well as the flexibility of adding more features to our application, we believe that the amount of work is appropriate for our group of five people.

Group Dynamics

Our group is one of the few that is working with an employer. Thus we have decided to schedule weekly meetings at 9:30 a.m with the employer, as well as formal team standups weekly on Saturdays at 4:00 p.m. We have decided to utilize various resources such as Trello for project management, discord for informal team communication and github updates (through webhooks), and Slack and Zoom for client communication.

Our vision of the UI has been drawn up on invision below:

https://276group.invisionapp.com/freehand/BGC-WorkLoad-Management-System-PExE8GEcs