The COSC 470/471 IH Projects (DRAFT)

Project Title: Blood Lead Monitoring (Trail, BC)

Background Information:

The Blood Lead Monitoring application is responsible for housing and displaying blood-related data necessary for the monitoring and the management of clients, families and the environment as a result of the emissions from Trails Lead Smelter in Trails, British Columbia (Kootenay Boundary).

This directly supports the health and safety of Trail and its residents by monitoring the amount of lead in resident's blood samples. The current application that supports this use-case is very old and was not built with best practices for software development in mind. This leads to the application being difficult to maintain, support, and extend with additional features.

There is a need to completely rebuild the application as this application will require future development and the current application poses a lot of difficulties for extendibility and supportability.

Project Main Objective(s):

The main objective of the project is to build out a full-stack web application solution that provides Trail with the ability to input blood test results and report on metrics. It will require a database that stores the information regarding patient's blood results as well as a front-end web application that allows users to manipulate the database in a CRUD fashion (Create-Read-Update-Delete blood result entries).

A rebuild of the application is required to support the blood lead tracking public health program in Trail. Efficiencies will be gained by eliminating multiple spreadsheets and redundancy in data collection and reporting, and improve quality of lead monitoring data and reporting.

Project Main Deliverable(s):

- Build out a database for the application to use that stores patient's blood test results for monitoring of lead in blood.
- Build out a front-end application that allows users to enter new blood test results, display test results, edit test results, and delete test results. The application will also have the ability to report out metrics to the end-user.

Project Title: Flexible Work Location Tool

Background Information:

IH adopted a flexible work location policy in June 2021. Interior Health (IH) supports flexible working locations to provide options for Employees to work in environments that best suit their job functions and work styles. It also supports IH to retain and recruit employees from diverse locations, optimally utilize space and effectively respond to events that impact the functioning of its workforce (i.e. pandemic, extreme weather events, etc.).

The policy outlines a number of requirements and options that must be met before an employee can work remotely. Before an employee can work remotely, a number of questionaires and assessment tools are required.

Project Main Objective(s):

This project would gather the required information in a centralized tool and automate the process for the approval, i.e Technology review; Safety at Home Checklist, Employee Work Location Assessment. The tools needs to provide analytics for location, costs, automated follow ups etc.

Project Main Deliverable(s):

- Build database to capture and analyze all required information.
- Automate processes utilizing PowerAutomate where possible.

Special considerations (equipment, location, constraints, existing material…):

Subject to HR approval. Approvals will be obtained once OC confirms the project is suitable as a Capstone project.