

Reflective Essay

ICP Final Project: File Processing

Akurugu Joseph Avoka

Intermediate Computer Programming

Dr Ebo Yamoah Adjepon & Dr Robert Sowah

Computer Science Department

Ashesi University

November 29, 2022.

Reflective Essay

This project write-up outlines the works that went into executing it, challenges faced.

Being given three different files (all having meta-data about flights across the world) to read from and perform some file operations such as drawing out the relationship among all three files and calculating distances between airports, we used the data descriptions about each of the files and performed the required operations on the files accordingly. Each file was manipulated using the concepts of objected oriented design, where classes were created for each file and state variables encapsulated.

After having privatised the field variables, getters and setters were employed to access those variables in each of the files. Each file has no less seven member functions that controlled accessibility to the member variables. All three files were created with the dot(.) h extension and their respective .cpp extension. The controlling method, main was not included in any of these files, it was created as separate file instead.

After having created setters and getters in each of the files, all three were imported into a new file, main.cpp for manipulations such as reading and constructions of appropriate data structures such as vector arrays and lists for data handling. Initially, the only operation that was successful was reading from the files but operating the data in each of the files was not successful.

But after consultations with friends, data operations from the files became possible. This was where, the file containing the main method became handy. All the other files with their .h and .cpp extensions were integrated into one to allow for accessibility with the main file. Eventually, three member functions were created within the main file to control everything that was tied to file handing as this project was concern. Ranging from taking user input file to producing an output file, these three functions work independently to keep track of the various states from a start state to a destination state and calculating the total distance covered. Working

Reflective Essay

with files in C++, can be very tedious and involving yet at the same time, interesting as the use of dynamic data structures such as vectors is common.