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Programming Foundations I

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**Problem Statement:**

The goal of this programming assignment was to create a program that could keep track of continents and the countries in them. The user inputs numbers to indicate what they would like the program to do, and then depending on the user’s choice they may be prompted to input properties of a country such as name, gross domestic product (GDP) in millions of USD, or population. The program prints things out to the user such as the countries in the continent. No error handling was required.

**Design:**

I didn’t make any design decisions due to the fact that everything was written/outlined for me beforehand. The continent class was basically an array of country objects. No algorithms were used. The main benefit of using an array to hold all the countries in each continent object is that it makes it easy to search for a certain country.

**Implementation:**

In Continent.cpp, the functions were filled out top to bottom. I started with the sample code uploaded to the PF1 website. For the ReadFromFile function, I looked back at one of my previous labs. I added the parameters to each function, and then I changed the Continent.h file to reflect the changes. After everything compiled, I filled in each function one at a time.

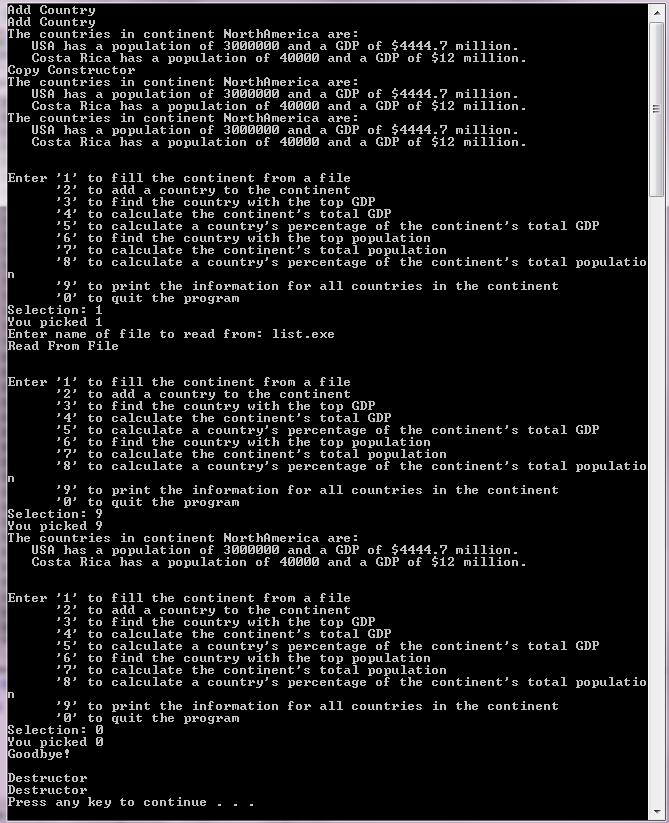
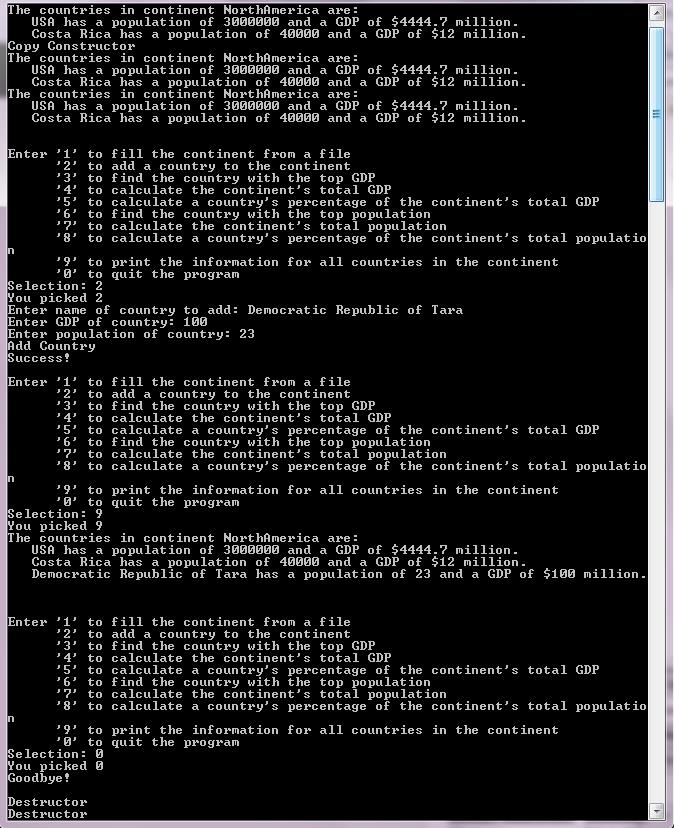
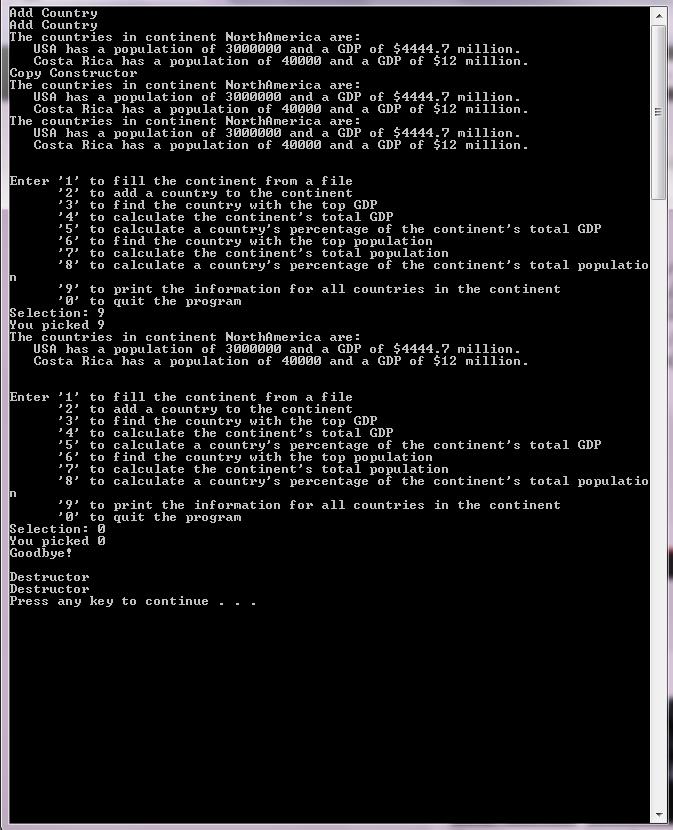
**Testing:**

I tested each function in my program multiple times before moving on to writing the next one. Normal inputs tested were single-word country names and positive numbers. Special cases included multiple-word countries (e.g. ‘United States’) and non-positive numbers. Everything worked in the end, but I had to change quite a few cin statements to getline() statements.

**Conclusions:**

The project was a success. Everything worked according to plan. I wouldn’t change anything next time. The project took about three hours to complete, including the time taken to google how to use getline().

**Test Cases:**

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