Faculty of Science, Engineering and Technology

Introduction to Programming

Tutorial Task 8.1: C My Functions

Overview

In this task you will implement your Pascal functions using the C language.

Purpose: Practice to create simple functions in C.

Task: Use the following instructions to implement a function and use it to calculate a value based on user input.

Time: This task should be completed before the start of week 3.

Resources:
- Programming Arcana
- Google
- Swinburne CodeCasts (YouTube Channel, iTunesU)
  - Learning a new language
  - Introducing Objects

Submission Details

You must submit the following files to Doubtfire:

- Program source code demonstrating your creation and use of C functions.
- Screenshot of the Terminal showing the execution of your program.

Make sure that your task has the following in your submission:

- The program must use one of your functions to calculate a return value.
- Code must follow C standard coding conventions.
- The code must compile and the screenshot show it working.
- Your program must demonstrate the use of functions with parameters, as well as constants.

Instructions

In this task you will write a version of the **SimplePolitics** terminal program in C.

Recall that this program did the following:

- Prompt the user to enter his or her name and birth year.
- Call a function to calculate how old the user was when Trump was elected President of the USA.

- Print to the terminal the user's name and age when Trump was elected.
- Call a **read_boolean()** function to prompt the user to enter whether he or she is a supporter of Brexit.

> **Note**: You will need to write the ReadBoolean() function in the file TerminalUserInput (and add **uses TerminalUserInput** to the top of **SimplePolitics.pas**)

- Print out whether the user supports Brexit or not based on the result of calling the read_boolean() function.

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Procedure: Main
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Variables:
 - Const YEAR_TRUMP_ELECTED = 2016 (to store an Integer value
   read from the file)
 - yearBorn  (to store String values read from the file)
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Steps:
1. Prompt the user to enter his or her name.
2. Read in the user's name.
3. Prompt the user to enter his or her year of birth.
4. Read in the user's year of birth.
5. Call the function calculate_age_when_Trump_elected(); to
   calculate how old the user was when Trump was elected President
   of the USA.
6. Print to the terminal the user's name and the message: 'you
   were X years old when Trump was elected'.
7. Call the read_boolean function passing a prompt asking if the
   user supports Brexit or not.
8. Print out the user's name, then either 'is a Brexit
   supporter'or 'is NOT a Brexit supporter' depending on the
   output of the function isBrexitSupporter().
9. Request the user to "Type 'Exit' to Continue".
10.     Read a blank line.
```
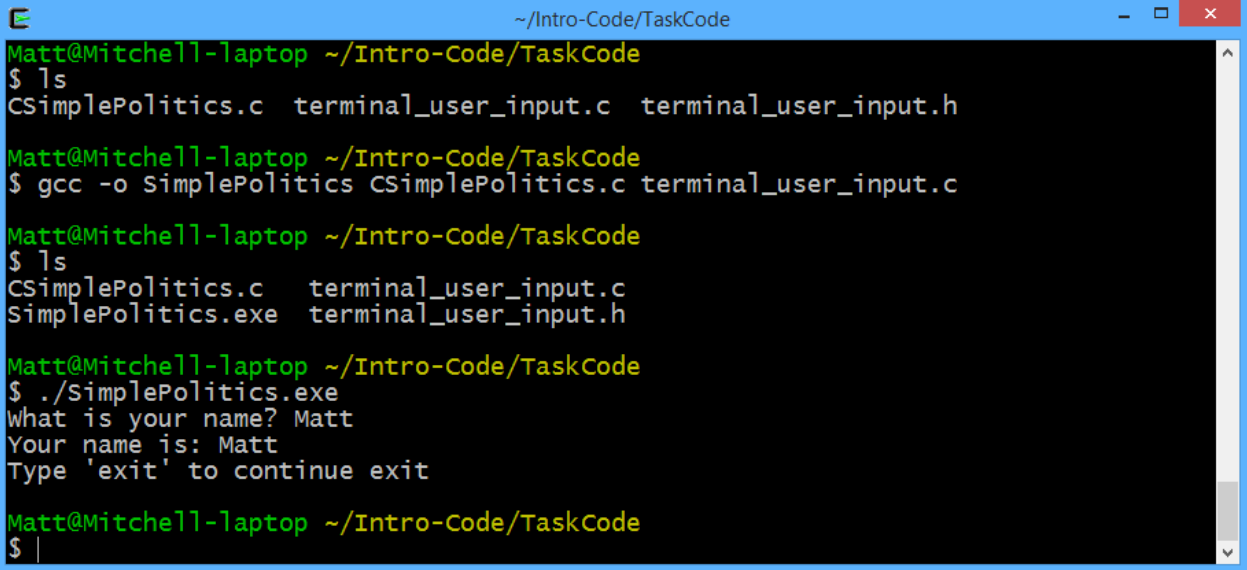
Use the sample code provided in the Resources for this task and modify that code to meet the requirements as described above.

Compile your program using MinGW gcc. The picture below shows the files before and after compiling and the output of partial implementation of the program:

Submit your code and a screen shot of the program compiling and running to Doubtfire.