

Lab 1 — A Simple C Program

Introduction

This lab requires you to write a simple C program to familiarize yourself with the lab computer and the C development software.

Program Requirements

You must write a C program that reads 2 characters from the keyboard, converts these characters to a number, prints a line containing that many dots (periods) on the next line on the screen and then starts a new line. For example, if the two characters read from the keyboard are '1' and '4' the program should print a line containing 14 dots.

Your program should print an error message if either of the two characters are not digits.

Using Turbo C

You will be assigned an account for the computers in the APSC 380 lab. Type "login" and enter your user name at the prompt. The first time you log in you should set (or change) your password by using the 'setpass' command.

Type the command "TC" to start the Turbo C compiler.

Press alt-E to switch to the edit window and enter your program. When you are done editing, press F2 to save it.

Press F9 to compile the program.

If your program contains syntax ("grammatical") errors, then error messages will be displayed in the Message window. You can move up and down through the messages and the location of the error will be highlighted in the edit window. While in the Message window you can press F1 to get more information about an error message.

Type alt-E to switch back to the edit window, fix the error(s) and repeat the edit/compile process until your program compiles without errors.

You can press the F1 function key at any time to access the help menu.

When your program has compiled properly, type control-F9 to run it. If the output is not visible you can type alt-F5 to switch to the run-time output window.

Hints

Use the `getche()` and `printf()` functions. You should use `#include <conio.h>` and `#include <stdio.h>` in your program to use these functions.

The `printf()` function can be used with only one "argument" as follows: `printf (". ") ;`. Using the special character sequence `\n` ("newline") in the `printf()` argument starts a new line in the output.

Demonstration and Lab Report

Demonstrate the proper operation of your program to the lab demonstrator.

Your write-up for this lab should consist of a listing of your program.

Program Style

The comments in your program must state concisely:

- the purpose of the program, the author and the date
- the purpose of each function and what it "returns" (if anything)
- the meaning of every variable whose meaning is not obvious

You may include additional comments if they are relevant and correct.