Practical 08

C Programming Language

THIS IS A PROCTORED PRACTICAL

YOU MUST SHARE YOUR SCREEN SO YOUR PARTICIPATION IN THIS PRACTICAL CAN FULLY INVIGILATED

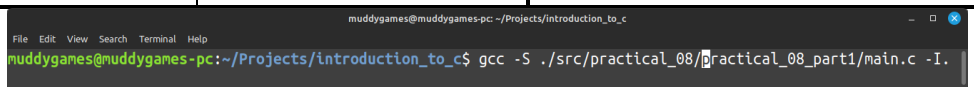
1. Create a Github repository "Assembly_and_C"
2. Create a sub directory PRACTICAL_##
3. Add Github link to CA Spreadsheet
   e.g https://STUDENTID.github.com/Assembly_and_c/PRACTICAL_##
4. Invite Lab Supervisors including **MuddyGames** as a collaborators
5. Go to designated group to complete practical
6. Upload completed Practical files to Github repository

NOTE: Use of Visual Studio Code or other C code editor allowed, use of internet allowed, use of slide deck(s) allowed. Installer located here https://code.visualstudio.com/ or non-telemetry version https://vscodium.com/

Create a unique folder ***e.g. practical_## / practical_##_part#*** for each practical section below.

Objective Understand and utilise Conditional Branches and Control Structures**:**

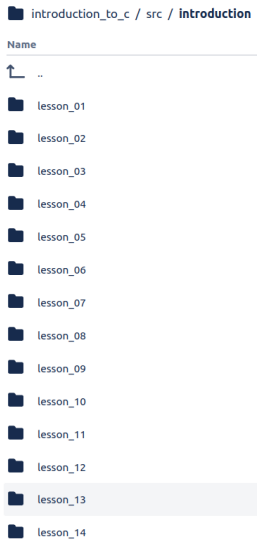
1	Create a C programming project folder and name the folder ***./practical_08/***
	
	Within the folder create a subfolder ***practical_08_part1***
	
	Within the subfolder create a file ***main.c***
	
	Edit compile and execute the code across and observe while debugging.
	
	Compile using the command below
		`#include "stdio.h" // standard IO header file`
		
		`// Mainline`
		`int main()`
		`{`
		`printf("Hello Assembly and C\n"); // Call to printf function`
		`return 0;`
		`}`
		
		Source Code




```
gcc -S ./src/practical_08/practical_08_part1/main.c -I.
```

2	Create a C programming project folder and name the folder ***./practical_08/***
	
	Within the folder create a subfolder ***practical_08_part1***
		`#include "stdio.h" // standard IO header file`
		
		`void main()`
		`{`
		`int a = 10;`
		`int b = 20;`
		`float c = 20.0122;`
		`char my_char = 'a';`

	Within the subfolder create a file ***main.c***
	
	Create a Makefile for the project and name the file ***Makefile (note no extension)***
	
	Details for creating a Makefile for projects are located here.
		char *my_char_ptr = "Hello";
		
		// Call to printf function a is substituted for %d
		printf("Value of a is %d\n", a);
		
		// Call to printf function a is substituted for %d
		printf("Value of b is %d\n", b);
		
		// Call to printf function c is substituted for %f precision is 4 characters
		printf("Value of c is %.4f\n", c);
		
		// Call to printf function my_char is substituted for %c
		printf("Value of my_char is %c\n", my_char);
		
		// Call to printf function my_char_ptr is substituted for %c
		printf("Value in memory for my_char_ptr is %s\n", my_char_ptr);
		
		// Call to printf function my_char_ptr is substituted for %c
		printf("Value in memory for first char of my_char_ptr is %c\n", *my_char_ptr);
		}
		
		Source Code

3	Complete code examples lessons 01 to 12 and 14	 **Source Code**
4	Complete Practical Quiz which will be provided by Lab Supervisor	

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Demonstrate completed assembly files at the end of the LAB and ensure it has been checked

Student Name		**Student Number**	
Date		**Checked**	