Practical 08

C Programming Language
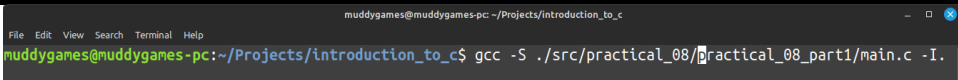
THIS IS A PROCTORED PRACTICAL

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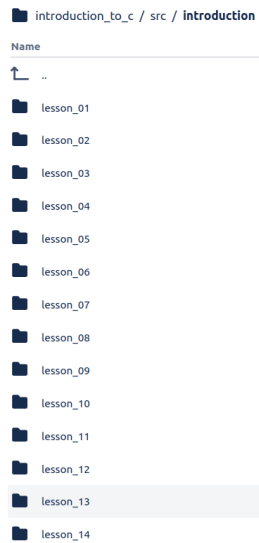
Create a unique folder *e.g. practical_## / practical_##_part#* for each practical section below.

Objective Understand and utilise Conditional Branches and Control Structures:

<table>
<tr>
<td>1</td>
<td>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</td>
<td>

```c
#include "stdio.h" // standard IO header file

// Mainline
int main()
{
printf("Hello Assembly and C\n"); // Call to printf function
return 0;
}
```

Source Code
</td>
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<td colspan="3">


```
gcc -S ./src/practical_08/practical_08_part1/main.c -I.
```
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<tr>
<td>2</td>
<td>Create a C programming project folder and name the folder
./practical_08/

Within the folder create a subfolder
practical_08_part1</td>
<td>

```c
#include "stdio.h" // standard IO header file

void main()
{
int a = 10;
int b = 20;
float c = 20.0122;
char my_char = 'a';
```
</td>
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</table>

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	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](#).	```c\nchar *my_char_ptr = "Hello";\n\n// Call to printf function a is substituted for %d\nprintf("Value of a is %d\n", a);\n\n// Call to printf function a is substituted for %d\nprintf("Value of b is %d\n", b);\n\n// Call to printf function c is substituted for %f precision is 4 characters\nprintf("Value of c is %.4f\n", c);\n\n// Call to printf function my_char is substituted for %c\nprintf("Value of my_char is %c\n", my_char);\n\n// Call to printf function my_char_ptr is substituted for %c\nprintf("Value in memory for my_char_ptr is %s\n", my_char_ptr);\n\n// Call to printf function my_char_ptr is substituted for %c\nprintf("Value in memory for first char of my_char_ptr is %c\n", *my_char_ptr);\n}\n``` **Source Code**
3	Complete code examples lessons 01 to 12 and 14	introduction_to_c / src / **introduction** Name ↑ .. 📁 lesson_01 📁 lesson_02 📁 lesson_03 📁 lesson_04 📁 lesson_05 📁 lesson_06 📁 lesson_07 📁 lesson_08 📁 lesson_09 📁 lesson_10 📁 lesson_11 📁 lesson_12 📁 lesson_13 📁 lesson_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	