Practical 08

C Programming Language

THIS IS A PROCTORED PRACTICAL

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

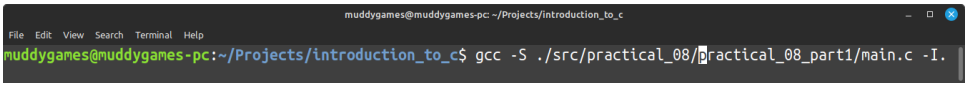
1. Create a Github repository "Assembly_and_C"
2. Create a sub directory PRACTICAL_##
3. Add Github link to CA Spreadsheet
   e.g https://STUDENTID.github.com/Assembly_and_c/PRACTICAL_##
4. Invite Lab Supervisors including **MuddyGames** as a collaborators
5. Go to designated group to complete practical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

<table>
<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 rowspan="2">

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

void main()
{ int a = 10; int b =
20; float c =
20.0122; char
my_char = 'a';

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

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<tr>
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<td>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.</td>
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3	Complete code examples lessons 01 to 12 and 14	 Source Code
4	Complete Practical Quiz which will be provided by Lab Supervisor	

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

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Date	**26/3/2025**	**Checked**	