**Practical 01**

**Assembly 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\_01
3. Add Github link to CA Spreadsheet

e.g [https://STUDENTID.github.com/Assembly\_and\_c/PRACTICAL\_01](https://studentid.github.com/Assembly_and_c/PRACTICAL_01)

1. Invite Lab Supervisors including MakeMuddyGames as a collaborators
2. Go to designated group to complete practical
3. Upload completed Practical files to Github repository

NOTE: Use of EASy68K editor and emulator allowed, use of internet allowed, use of slide deck(s) allowed. Installer located here <http://www.easy68k.com/>

Create a unique file ***e.g. part1.X68*** for each practical section below.

**Objective** Understand and utilise Basic Memory concepts, BINARY, HEX and Literals**:**

|  |  |  |
| --- | --- | --- |
| 1 | Create a new 68K project and name the file ***part1.logicly***  Create the following circuit using logic.ly | Store the following Decimal Values as  Binary (Bits LSB to MSB)  0 to 15 |
|  |  | |
| 2 | Create a new 68K project and name the file ***part2.X68***    Edit compile and execute the code across, examine and note contents of data registers and memory. Identify the memory location of $3000 and its contents. | MOVE.L #%00001111,D1  MOVE.B D1,D2  MOVE.B D1,$2000  MOVE.B $2000,D2  MOVE.B $2000,$3000 |
| 3 | Create a new 68K project and name the file ***part3.X68*** | ORG $1000  START:  MOVE.B #$64,D1  LEA text, A1 |

Page **1** of **2**

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|  | Edit compile and execute the code across and observe the output. | MOVE #14,D0  TRAP #15    MOVE #3,D0  TRAP #15    SIMHALT    text dc.b 'Data Register: ',0    END START |
| 4 | Create a new 68K project and name the file ***part4.X68***    Edit compile and execute the code across and observe the input and output. | |
| ORG $1000  START:  LEA text, A1  MOVE #4,D0  TRAP #15  MOVE #14,D0  TRAP #15  MOVE #3,D0  TRAP #15  SIMHALT  text dc.b 'Data Register: ',0    END START | | |

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

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| **Student Name** | **Ariel Fajimiyo** | **Student Number** | **C00300811** |
| **Date** | **19/01/2025** | **Checked** |  |

Page **2** of **2**