# Activity 1

1. $ is used to indicate hex
2. # is used to declare immediate data (real data). This can be used in combination with $. Where as if $ is used alone, it would mean hex address
3. $0D is used for carriage return and $0A is used for line feed
4. A Null terminated string is a char array with a null value 0x00 after the last valid character in the string (source, stackexchange)
5. In 68k, a null is 0

# Activity 2

|  |  |  |  |
| --- | --- | --- | --- |
| CR | CR EQU $0D | Carriage return | Return to beginning line |
| LF | LF EQU $0A | Line feed | Advance to new line |
| Trap #15 | Trap #15 | Used for IO | Read the task number in D0 and act according to it |
| MOVE | MOVE.B #14, D0 | Move 14 to D0 | Move 14 to D0 for trap task to read and display string at A1 |
| Equate | CR EQU $0D | Equate right hand to left hand | Act like an assignment |
| Define constant | Message DC.B | Define a constant | Define a constant with extension byte long word |
| Originate | ORG $1000 | Start from address $1000 | Same like definition |
| End | END | End the instruction | Same like definition |
| Line comment | \*is a comment | Provide comment | Same like definition |

# Activity 2 Extended – IO

Sounds simple at first. Luckily, I already read the tutorial. So this took around 10 minutes. Just printed back what was entered

# Activity 3

|  |  |  |  |
| --- | --- | --- | --- |
| Trap #9 | Trap #9 | Trap number 9 for trace | Seems like the easy68k only have trap #15. But looking at online resources, trap #9 is for trace exception |
| Load Effective Address | LEA MESSAGE,A1 | Load the defined message into Address a1 | This will load the message into the A1 location so that the trap can utilize it later |
| Branch less than | CMP.B #1,D0  BLT Invalid | Branch to invalid | This is used for branching to another location if left hand side is less than right hand side |
| Branch Not Equal | CMP.B #1,D0  BNE DONE | Branch to a location done | Used to check if the compare is equal. If they are, branch to the location done |
| Branch always | BRA LOOP | Return to the beginning of the loop | Same like definition |