**Name:** Thanh Tam Vo
**StudentID:** 103487596

# COS10004 - Computer Systems – Lab 8 Submission

## Question 8

### Question 8.1

Because 8-bit of 32-bit number is for immediate value, then the MOV will work with 24 bit remaining.
4-bit is for rotating (ROR)
20-bit is for presenting the instruction

In total, we have 32 bits but MOV only works with 24 bits

### Question 8.2

We can handle this problem by split the HEX number into multiple parts then use the operator *orr* to add them up to the given number.

### Question 8.3

My student ID is 103487596, so the last 6 digits of my student ID is 487596.

Next, I converted that number to HEXA, which is 0x770AC. Now I decided to split the number into 3 parts:

$$770AC_{16} = 70000_{16} + 07000_{16} + 000AC_{16}$$

Code in my file OK2.asm

```
mov r2,$70000
orr r2,$07000
orr r2,$000AC
```