National Sun Yat-Sen University
ASSEMBLY LANGUAGE AND MICROCOMPUTER
Program Assignment #2
Due 11:59 PM Nov 30 2023

<**Programming Problem II**> Write an ARM assembly code to implement a ***deasm*** program which can partially deassembly the instruction contents of your program. Your program should identify every ***data processing, LDR, SDR and branch instructions*** written in a given program ***test.s***, and show its condition filed, and instruction name. For branch instruction, you should also show the target PC value..

For example, if you execute the program as follows:

deasm

Then the screen should display the following results：

PC	***condition***	***instruction***	
0	AL	ADD	
4	EQ	SUB	
8	GE	B	4
12	EQ	LDR	
16	AL	UND	
20	LT	CMP	

……

Here the instruction for PC=16 does not belong to those instructions you have to identify, so you just need to show **UND** as its instruction name.

The program ***test.s*** will be given by using ***.include*** gcc assembly directive. In your assembly program, you should write something like:

```
                ……
                BL start_deasm
                .include ‘test.s’
start_deasm:    …….
                ……..
```

The program ***test.s*** will be embedded, and complied along with your other part of the program. This test file has to be put along in the same directory with you ***deasm*** program.