BIL 101 – Introduction to Computer Science

HW 4

Due to 21.10.2015, 13:00

Submit hardcopy of your homeworks to Nur Banu Albayrak (118). **Strictly no hardcopy will be accepted after 13:00!!!**

PART 1

Consider the machine language in Appendix C of your textbook, draw the state of the memory and the registers after the execution. What does the program do? (Explain instruction by instruction.)

PC = A1

MEMORY	
A0	0105
A1	11A0
A2	2000
A3	2200
A4	2301
A5	2500
A6	2608
A7	8431
A8	A101
A9	5554
AA	5223
AB	8762
AC	B7A7
AD	35AF
AE	C000
AF	1111

PART 2

Considering the machine language in Appendix C of your book, write a machine language program that;

- Checks the bit pattern stored in memory cell A3
- If the bit pattern is 01, writes 01 to the memory cell A4
- Else writes 00 to the memory cell A4 and exits

PART 3

What does the following python programs do? Explain briefly.

1. Specify the content of the variables after program execution.

```
x = 10
y = 20
t = x
x = y
y = t
```

2. Specify output of the program for three different cases.

```
num =  float(input("Enter a number:")
if num > 0:
   print("number of category 1")
elif num == 0:
   print("number of category 2")
else:
   print("number of category 3")
```

1. Specify output of the program for two different cases.

```
num = int(input("Enter a number:")
if (num % 2) == 0:
   print("{0} is a number of category 1" .format(num))
else:
   print("{0} is a number of category 2" .format(num))
```

PART 4

Write a program that gets 3 integers from the user, finds the largest number and prints the largest number. (Do not use the function max)