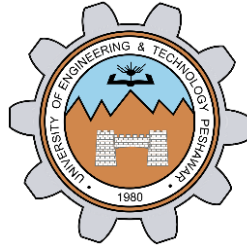


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## COA Lab

### Quiz # 1



**Fall 2020**

### **CSE304L Computer Organization and Architecture Lab**

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Class Section: **B**

“On my honor, as student of University of Engineering and Technology, I have neither given nor received unauthorized assistance on this academic work.”

Student Signature: \_\_\_\_\_

Submitted to:

**Engr. Amaad Khalil**

December 28, 2020

Department of Computer Systems Engineering  
University of Engineering and Technology, Peshawar

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## Activity # 01

### Title:

Program to print numbers from 1 to 5

### Source code:

main:

```
li $t0,1
```

print:

```
move $a0,$t0
```

```
li $v0,1
```

```
syscall
```

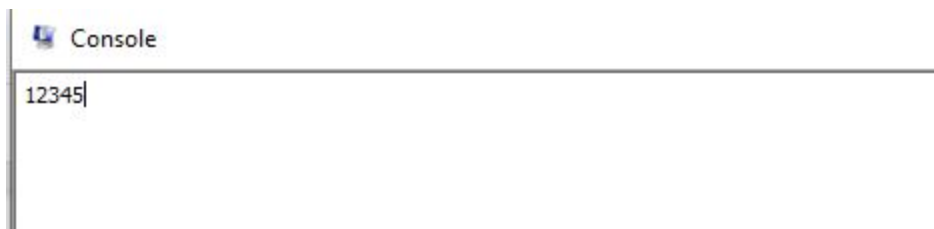
```
addi $t0,$t0,1
```

```
ble $t0,5, print
```

```
li $v0,10
```

```
syscall
```

### Output:



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## Activity # 02

### Title:

program to find the sum of first n natural numbers

### Source code:

```
.data
    str: .asciiz "Enter a positive integer: "
    str1: .asciiz "\nSum = "
.text
main:

    li $v0,4
    la $a0,str
    syscall

    li $v0,5
    syscall
    move $t0,$v0

    li $t1,0
    li $t2,1

label:
    add $t1,$t1,$t2
    addi $t2,$t2,1

    ble $t2,$t0, label

    li $v0,4
    la $a0,str1
    syscall

    move $a0,$t1
    li $v0,1
    syscall

    li $v0,10
    syscall
```

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## **Output:**

```
Console
Enter a positive integer: 5
Sum = 15
```

## **Activity # 03**

### **Title:**

Display Multiplication table up to 10

### **Source code:**

```
.data
    str: .asciiz" * "
    str1: .asciiz" = "
    str2: .asciiz"Enter a positive integer: "
    str3: .asciiz"\n"
.text
main:

    li $v0,4
    la $a0,str2
    syscall

    li $v0,5
    syscall
    move $t0,$v0

    li $t1,1
label:
    move $a0,$t0
    li $v0,1
    syscall

    li $v0,4
    la $a0,str
    syscall
```

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```
move $a0,$t1
li $v0,1
syscall
```

```
li $v0,4
la $a0,str1
syscall
```

```
mul $t2,$t0,$t1
move $a0,$t2
li $v0,1
syscall
```

```
li $v0,4
la $a0,str3
syscall
```

```
addi $t1,$t1,1
```

```
ble $t1,10,label
```

```
li $v0,10
syscall
```

### **Output:**

```
Enter a positive integer: 7
7 * 1 = 7
7 * 2 = 14
7 * 3 = 21
7 * 4 = 28
7 * 5 = 35
7 * 6 = 42
7 * 7 = 49
7 * 8 = 56
7 * 9 = 63
7 * 10 = 70
```