

## CDA 3103 – Computer Organization (Spring 2005)

### Quiz # 4

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Last Name : \_\_\_\_\_ First Name : \_\_\_\_\_  
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**Question # 1:** Write MIPS assembly for the following C code.

Switch(k)

```
{  
    case 0:      f = i+j; break;  
    case 1:      f = g+h; break;  
    case 2:      f = g-h; break;  
    case 3:      f = i-j; break;  
}
```

f: \$s0 ,        g: \$s1 ,        h: \$s2 ,        i: \$s3 ,        j: \$s4 ,        k: \$s5

**Answer**

```
    mov $a1,0  
    beq $s5,$a1,CASE_0  
    mov $a1,1  
    beq $s5,$a1,CASE_1  
    mov $a1,2  
    beq $s5,$a1,CASE_2  
    mov $a1,3  
    beq $s5,$a1,CASE_3
```

```
    j AFTER_CASE_SWITCH
```

CASE\_0:

```
    add $s0 , $s3 , $s4
```

```
    j AFTER_CASE_SWITCH
```

CASE\_1:

```
    add $s0 , $s1 , $s2
```

```
    j AFTER_CASE_SWITCH
```

CASE\_2:

```
    subu $s0 , $s1 , $s2
```

```
    j AFTER_CASE_SWITCH
```

CASE\_3:

```
    subu $s0 , $s3 , $s4
```

AFTER\_CASE\_SWITCH: