

Name: KEY

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COE 205, Term 022
Computer Organization & Assembly Programming

Quiz# 6

Date: Sunday, May 11, 2003

Q1. Write a procedure that gets a one byte number passed on the stack and returns the square of the number also on the stack in the place of the passed number. Call the procedure to find the square of the decimal number 20.

```
.Code
.Startup
MOV AL, 20
PUSH AX
CALL Square
POP AX
.EXIT
Square PROC
    MOV BP, SP
    MOV AX, [BP+2]
    MUL AL
    MOV [BP+2], AX
    RET
Square ENDP
END
```

Q2. Write an assembly program to check the content of register AL and perform the following:

- i. If AL is a lower case character (a...z), put the value 1 in AH.
- ii. If AL is an upper case character (A..Z), put the value 2 in AH.

```
    CMP AL, 'a'
    JB Next
    CMP AL, 'z'
    JA Next
    MOV AL, 1
    JMP Done
Next:  CMP AL, 'A'
    JB Done
    CMP AL, 'Z'
    JA Done
    MOV AL, 2
Done:
```