Name: Priyanka Suresh Salunke

Class: SE COMP 1

Roll no.: 70

PRN: F19111151

PRACTICAL ASSIGNMENT

1. Explain BT, JS, loop instructions with examples

Ans

BT (Bit test):
This instruction tests the status of the specified bit in the instruction. The status of that bit is copied to carry flag.
eg:
BT, EAX 05 This instruction copies the bit 5 of the EAX register to carry flag

JS (Jump if sign or jump if negative):
In this instruction sign flag (SF) is set
eg:
Finding even/odd number is possible using JS instruction. If it is set, the number is negative else the number is positive

Loop:
This instruction is used to repeat a series of instructions some number of times.
The number of times the instruction sequence is to be repeated is located into CX (ECX). Each time loop executes, CX is decremented by 1
If CX ≠ 0, execution will jump to destination specified label
If CX = 0, execution will go to the next instruction after loop

eg.:

```
MOV SI , offset ARRAY
MOV AL , 00H
MOV CX , 10H , Counter loaded
AI : ADD AL [SI];
INC SI
LOOP AI
```

2. Explain paging in 80386?

Ans Paging is one of the memory management techniques used for virtual memory multitasking operating system.
The segmentation scheme may divide the physical memory into a variable size segments of the program, but the pages do not have any logical relations with the program and paging divides the memory into a fixed size pages.
The pages are just like just fixed size portion of the program module or data.
The advantage of paging scheme is that the complete segment of a task need not be in the physical memory at any time.
Only a few pages of the segment, which are required currently for the execution need to be available in the physical memory. Thus the memory requirement of the task is substantially reduced relinquishing the available memory for other tasks.
Whenever the other pages of task are required for

execution, they may be fetched from the secondary storage.
The paging is a mechanism provider an effective technique to manage the physical memory for multitasking systems.

3 Draw the control register of 80386?