**Experiment 7: - Write a CPU bound C program and a i/o bound C program and observe the effect of their CPU share using the top command and it’s variants.**

1. **For CPU bound: -**

**Syntax:** #include<stdio.h>

#include<time.h>

void main(){

clock\_tr start, end;

double runtime;

start = clock();

int I, num=1, prime=0;

while(num<=10000000){

i=2;

while(i<=num){

if(num%i=0)

break;

i++;

}

If(i==num)

prime++;

printf(“%d prime numbers calculated\n”,prime);

n++;}

end = clock();

}

**E.g. : Ex\_7a.1, Ex\_7a.2, Ex\_7a.3.**

1. **For i/o bound: -**

**Syntax: -** #include<stdio.h>

#include<time.h>

int mani(){

int j, k, n;

while(1){

printf(“Enter any number:”);

scanf(“%d”,&j);

printf(“Enter any number:”);

scanf(“%d”,&k);

n=j%k;

printf(“remainder: %d”,n);

time\_t rawtime;

struct tm\* timeinfo;

time(&rawtime);

timeinfo= localtime(&rawtime);

printf(“\nCurrent local time and date= %s”,asctime(timeinfo));

}

return 0;

}

**E.g.:**   **Ex\_7b.1, Ex\_7b.2.**