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.

(a) 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.

(b) 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.**