Experiment 7:

Write a C program for CPU bound and IO bound and observe the affect of their CPU sharing using the top command

CPU bound :

```c
#include<stdio.h>
#include<time.h>
void main() {
clock_t start, end;
double runtime;
start=clock();
int i, num = 1, primes = 0;
while (num<=10){
i=2;
while (i<=num){
if (num%i==0)
break;
i++;
}
if (i==num)
primes++;
printf("%d prime numbers calculated \n", primes);
num++;
}
end=clock();
}
```

IO bound :

```c
#include<stdio.h>
#include<time.h>
int main()
{
int j,k,n;
while(1){
printf("\nEnter any number : ");
scanf("%d",&k);
printf("Enter any number : ");
scanf("%d",&j);
n=k%j;
printf("%d",n);

time_t rawtime;
struct tm * timeinfo;
time( &rawtime );
timeinfo = localtime ( &rawtime );
printf(" \nCurrent local time and date: %s", asctime (timeinfo));
}
}
```