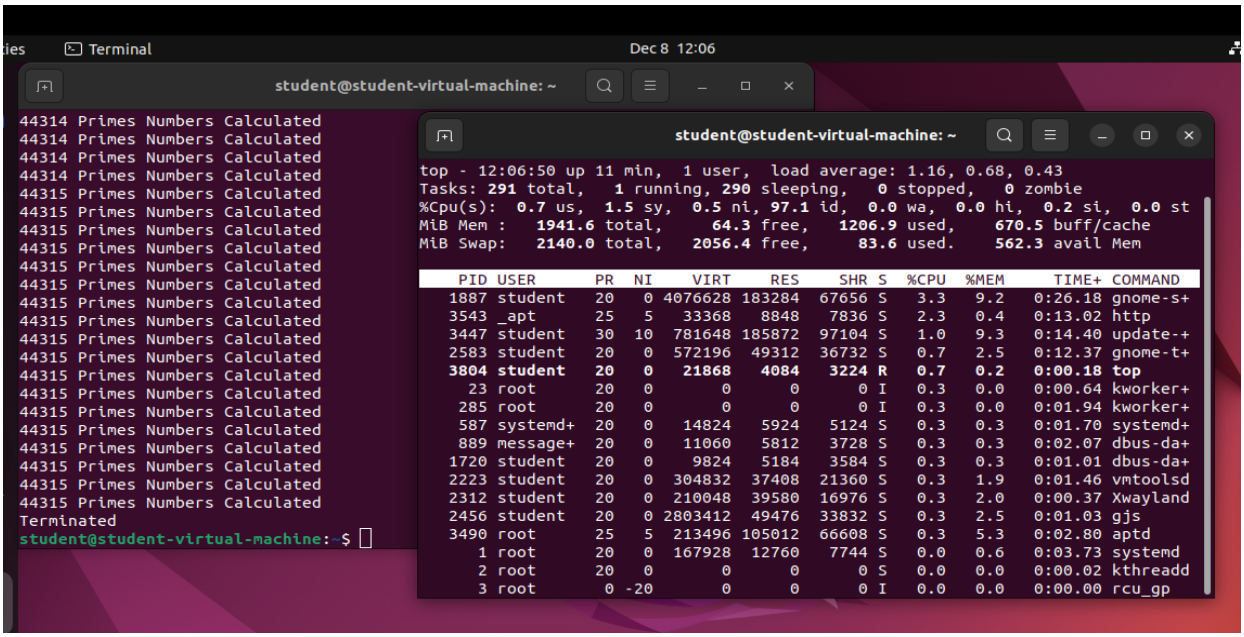
Experiment – 7

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 its variants

For CPU Bound:

```
#include<stdio.h>
#include<time.h>
void main()
{
clock_t start, end;
double runTime;
start = clock();
int i, num=1, primes=0;
while(num<=10000000)
{
i=2;
while(i<=num){
if(num%i==0)
break;
i++;
}
if(i==num)
primes++;
```

```
printf("%d Primes Numbers Calculated\n",primes);
num++;
}
end=clock();
}
```



For I/O Bound:

```
#include<stdio.h>
#include<time.h>
int main()
{
int j,k,n;
while(1){
printf("Enter any number: ");
```

```
scanf("%d",&k);
printf("\n Enter any number: ");
scanf("%d",&j);
n=k%j;
printf("%d",n);
time_t rawtime;
struct tm * timeinfo;
time(&rawtime);
timeinfo=localtime(&rawtime);
printf("\n Current local time and date: %s",asctime(timeinfo));
}
}
```