q1)FCFS

```
#include<stdio.h>
int main()
{
 int n;
 printf("enter the number of processes");
 scanf("%d",&n);
 int bt[n];
 printf("enter the burst time for each process, starting from the
first process in sequence");
 for(int i=0;i<n;i++)
 scanf("%d",&bt[i]);
 int wt[n];
 for(int i=0;i<n;i++)
 wt[i]=0;
 int tt[n];
 for (int i=0;i<n;i++)
 tt[i]=0;
 for(int i=1;i<n;i++)
{
  wt[i]=wt[i-1]+bt[i-1];
}
 for(int i=0;i<n;i++)
 tt[i]=wt[i]+bt[i];
 for(int i=0;i<n;i++)
 printf("process %d: waiting time=%d turnaround
time=%d\n",i+1,wt[i],tt[i]);
 float wtavg,ttavg;
 int wttotal=0,tttotal=0;
 for(int i=0;i<n;i++)
 {
  wttotal=wttotal+wt[i];
  tttotal=tttotal+tt[i];
 }
 wtavg=wttotal/n;
 ttavg=tttotal/n;
 printf("avg waiting time=%f avg turnaround time=%f",wtavg,ttavg);
return 0;
}
```

output:

```
enter the number of processes  5
enter the burst time for each process, starting from the first process
in sequence  0 1 2 3 4
process 1: waiting time=0 turnaround time=0
process 2: waiting time=0 turnaround time=1
process 3: waiting time=1 turnaround time=3
process 4: waiting time=3 turnaround time=6
process 5: waiting time=6 turnaround time=10
avg waiting time=2.000000 avg turnaround time=4.000000
```

q2)SJF

```
#include<stdio.h>
int main()
{
 int n;
 printf("enter the number of processes");
 scanf("%d",&n);
 int bt[n];
 printf("enter the burst time for each process, starting from the
first process in sequence");
 for(int i=0;i<n;i++)
 scanf("%d",&bt[i]);
 int wt[n];
 for(int i=0;i<n;i++)
 wt[i]=0;
 int tt[n];
 for (int i=0;i<n;i++)
 tt[i]=0;
 for(int i=1;i<n;i++)
{
 int current=bt[i];
 int j;
 for(j=i-1;j>=0&&bt[j]>current;j--)
{
  bt[j+1]=bt[j];
}
bt[j+1]=current;
}
for(int i=1;i<n;i++)
{
  wt[i]=wt[i-1]+bt[i-1];
}
 for(int i=0;i<n;i++)
 tt[i]=wt[i]+bt[i];
 for(int i=0;i<n;i++)
 printf("burst time:%d waiting time=%d turnaround
time=%d\n",bt[i],wt[i],tt[i]);
 float wtavg,ttavg;
 int wttotal=0,tttotal=0;
 for(int i=0;i<n;i++)
 {
  wttotal=wttotal+wt[i];
  tttotal=tttotal+tt[i];
 }
 wtavg=wttotal/n;
 ttavg=tttotal/n;
 printf("avg waiting time=%f avg turnaround time=%f",wtavg,ttavg);
return 0;
}
```

output:

```
enter the number of processes  5
enter the burst time for each process, starting from the first process
in sequence 1 2 3 4 5
burst time:1 waiting time=0 turnaround time=1
burst time:2 waiting time=1 turnaround time=3
burst time:3 waiting time=3 turnaround time=6
burst time:4 waiting time=6 turnaround time=10
burst time:5 waiting time=10 turnaround time=15
avg waiting time=4.000000 avg turnaround time=7.000000
```

q3)Round Robin

```
#include<stdio.h>

int main()
{
    int  n;
    printf("Enter number of processes:");
    scanf("%d",&n);
    int wttotal = 0, tttotal = 0, bt[n], tempbt[n];
    int x = n;
   printf("enter the burst time for each process: \n");
    for(int i = 0; i < n; i++)
    {
        printf("Burst Time:   ");
        scanf("%d", &bt[i]);
        tempbt[i] = bt[i];
    }
    int qt;
    printf("Enter quantum size:");
    scanf("%d", &qt);
    int total = 0,  flag = 0,i;
    for(total=0, i = 0; x!=0; )
    {
        if(tempbt[i] <= qt && tempbt[i] > 0)
        {
            total = total + tempbt[i];
            tempbt[i] = 0;
            flag=1;
        }
        else if(tempbt[i] > 0)
        {
            tempbt[i] = tempbt[i] - qt;
            total=total+qt;
        }
        if(tempbt[i]==0 && flag==1)
        {
            x--;
            printf("\nburst time:%d turnaround time:%d waiting 
time:%d", bt[i],
                   total, total-bt[i]);
             wttotal=wttotal+total-bt[i];
            flag =0;
        }
        if(i==n-1)
        {
            i=0;
        }
        else
        {
            i++;
        }
    }
   float wtavg,ttavg;
  wtavg=wttotal/n;
  ttavg=total/n;
  printf("avg waiting time:%f avg turnaround time:%f",wtavg,ttavg);


    return 0;
}
```

output:

```
Enter number of processes:6
enter the burst time for each process:
Burst Time:   1 2 3 4 5 6
Burst Time:   Burst Time:   Burst Time:   Burst Time:   Burst Time:
Enter quantum size:5

burst time:1 turnaround time:1 waiting time:0
burst time:2 turnaround time:3 waiting time:1
burst time:3 turnaround time:6 waiting time:3
burst time:4 turnaround time:10 waiting time:6
burst time:5 turnaround time:15 waiting time:10
burst time:6 turnaround time:21 waiting time:15avg waiting
time:5.000000 avg turnaround time:3.000000
```

q4) Priority Scheduling

```
#include<stdio.h>
int main()
{
 int n;
 printf("enter the number of processes");
 scanf("%d",&n);
 int pb[n][2];
 printf("enter the burst time and priority for each process, starting
from the first process in sequence\n");
 for(int i=0;i<n;i++)
{
  printf("priority of process %d: ",i+1);
  scanf("%d",&pb[i][0]);
  printf(" burst time of process %d: ",i+1);
  scanf("%d",&pb[i][1]);
}
for(int i=1;i<n;i++)
{
 int current=pb[i][0];
 int current2=pb[i][1];
 int j;
 for(j=i-1;j>=0&&pb[j][0]<current;j--)
 {
  pb[j+1][0]=pb[j][0];
  pb[j+1][1]=pb[j][1];
 }
pb[j+1][0]=current;
pb[j+1][1]=current2;
}
int wt[n];
 for(int i=0;i<n;i++)
 wt[i]=0;
 int tt[n];
 for (int i=0;i<n;i++)
 tt[i]=0;
 for(int i=1;i<n;i++)
{
  wt[i]=wt[i-1]+pb[i-1][1];
}
 for(int i=0;i<n;i++)
 tt[i]=wt[i]+pb[i][1];
 for(int i=0;i<n;i++)
 printf("priority:%d burst time=%d waiting time=%d turnaround
time=%d\n",pb[i][0],pb[i][1],wt[i],tt[i]);
 float wtavg,ttavg;
 int wttotal=0,tttotal=0;
 for(int i=0;i<n;i++)
 {
  wttotal=wttotal+wt[i];
  tttotal=tttotal+tt[i];
 }
 wtavg=wttotal/n;
 ttavg=tttotal/n;
 printf("avg waiting time=%f avg turnaround time=%f",wtavg,ttavg);
return 0;
}
```

output:

```
enter the number of processes  5
enter the burst time and priority for each process, starting from the
first process in sequence
priority of process 1: 5
 burst time of process 1: 3
priority of process 2: 3
 burst time of process 2: 6
priority of process 3: 4
 burst time of process 3: 2
priority of process 4: 2
 burst time of process 4: 6
priority of process 5: 1
 burst time of process 5: 8
priority:5 burst time=3 waiting time=0 turnaround time=3
priority:4 burst time=2 waiting time=3 turnaround time=5
priority:3 burst time=6 waiting time=5 turnaround time=11
priority:2 burst time=6 waiting time=11 turnaround time=17
priority:1 burst time=8 waiting time=17 turnaround time=25
avg waiting time=7.000000 avg turnaround time=12.000000
```