Task 1

```
#include <stdio.h>
#include<string.h>

void swap(int *x,int *y){
	int temp=*x;
	*x=*y;
	*y=temp;
}

int main(){
	int n;
	int pt=0;
	int bt[50],at[50],remBt[50],wt[50],tt[50],c[50];
	printf("Enter total number of Process: ");
	scanf("%d",&n);
	char process[n][n],t[n];
	for(int i=0;i<n;i++)
	{
		printf("Enter the Process names arrival time and brust time: \n");//input format=
p1 0 5
		scanf("%s %d %d",process[i],&at[i],&bt[i]);
		remBt[i]=bt[i];
	}
	//printf("ss");
	for (int i=0;i<n;i++){
```

```
        for (int j=i+1;j<n;j++){
                if (at[j]<at[i]){
                        swap(&at[i],&at[j]);
                        swap(&bt[i],&bt[j]);
                        swap(&remBt[i],&remBt[j]);
                        strcpy(t,process[i]);
                        strcpy(process[i],process[j]);
                        strcpy(process[j],t);
                }
        }
}
int count=0,c1=0, c2=0;
remBt[100]=9999;
while(count<n){
        int minIndex=100;
        pt++;
        c2=0;
        while (c2<n){
                if (at[c2]<=c1 && remBt[c2]<remBt[minIndex] && remBt[c2]>0){
                minIndex=c2;
                }
                c2++;
        }
        remBt[minIndex]=remBt[minIndex]-1;
        if (remBt[minIndex]==0){
                count++;
                tt[minIndex]=pt-at[minIndex];
```

```
                wt[minIndex]=tt[minIndex]-bt[minIndex];
                c[minIndex]=pt;
            }
            c1++;
        }
        printf("\nPName CT TT WT\n");
        for(int i=0;i<n;i++){
            printf("%s %d %d %d\n",process[i],c[i],tt[i],wt[i]);
        }
}
```

```
akib_zab@akib:~/Desktop$ gcc -o t1 t1.c
akib_zab@akib:~/Desktop$ ./t1
Enter total number of Process: 5
Enter the Process names arrival time and brust time:
p1 0 5
Enter the Process names arrival time and brust time:
p2 2 2
Enter the Process names arrival time and brust time:
p3 3 7
Enter the Process names arrival time and brust time:
p4 4 4
Enter the Process names arrival time and brust time:
p5 5 5

PName CT TT WT
p1 7 7 2
p2 4 2 0
p3 23 20 13
p4 11 7 3
p5 16 11 6
```

TASK 2

```
#include<stdio.h>
#include<string.h>
```

```
int main()
{
	int n,q,pt=0,count=0;
	printf("Enter the number of processes: ");
	scanf("%d",&n);
	int bt[50],com[50],wt[50],tt[50],remBt[50];
	int counted[n];
	char process[n];
	for(int i=0;i<n;i++)
	{
		printf("Enter the Brust Time for processes serially" );
		process[i]=i;
		scanf("%d",&bt[i]);
		remBt[i]=bt[i];
	}
	for (int i=0;i<n;i++){
		counted[i]=0;
	}
	printf("Enter Quantum time: ");
	scanf("%d",&q);
	while(1)
	{
		int c1=0;
		while(c1<n)
		{
			if (remBt[c1]==0 ){
				if (counted[c1]==0){
```

```
                counted[c1]=1;
                count++;
                if(count==n){
                    break;
                }
            }
        }
        else if(remBt[c1]<=q ){
            if(remBt[c1]>0){
                pt+=remBt[c1];
                remBt[c1]=0;
                com[c1]=pt;
                tt[c1]=pt;
            }
        }
        else {
            pt+=q;
            remBt[c1]=remBt[c1]-q;
            tt[c1]=pt;
            com[c1]=pt;
        }
        c1++;
    }
    if(count==n){
    break;
    }
}
```

```
	for(int i=0;i<n;i++)
	{
		wt[i]=tt[i]-bt[i];
	}
	printf("\nProcess CT TT WT\n");
	for(int i=0;i<n;i++)
	{
		printf("%d %d %d %d\n",process[i]+1,com[i],tt[i],wt[i]);
	}
}
```

```
akib_zab@akib:~/Desktop$ gcc -o t2 t2.c
akib_zab@akib:~/Desktop$ ./t2
Enter the number of processes: 4
Enter the Brust Time for processes serially53
Enter the Brust Time for processes serially17
Enter the Brust Time for processes serially68
Enter the Brust Time for processes serially24
Enter Quantum time: 20

Process CT TT WT
1 134 134 81
2 37 37 20
3 162 162 94
4 121 121 97
```

TASK 3

```
#include <stdio.h>
#include<string.h>

void swap(int *x,int *y){
	int temp=*x;
```

```
	*x=*y;
	*y=temp;
	}

int main(){
	int n;
	int pt=0;
	int bt[50],at[50],remBt[50],wt[50],tt[50],c[50];
	printf("Enter total number of Process: ");
	scanf("%d",&n);
	int priority[n];
	char process[n][n],t[n];
	for(int i=0;i<n;i++)
	{
		printf("Enter the Process names arrival time,brust time and priority: \n");//input format= p1 0 5 2
		scanf(" %s %d %d %d",process[i],&at[i],&bt[i],&priority[i]);
		remBt[i]=bt[i];
	}
	//printf("ss");
	for (int i=0;i<n;i++){
		for (int j=i+1;j<n;j++){
			if (at[j]<at[i]){
				swap(&priority[i],&priority[j]);
				swap(&at[i],&at[j]);
				swap(&bt[i],&bt[j]);
				swap(&remBt[i],&remBt[j]);
```

```
                        strcpy(t,process[i]);
                        strcpy(process[i],process[j]);
                        strcpy(process[j],t);
                }
        }
}

priority[100]=9999;
int count=0,c1=0, c2=0;
while(count<n){
        int minIndex=100;
        pt++;
        c2=0;
        while (c2<n){
                if (at[c2]<=c1 && priority[c2]<priority[minIndex] && remBt[c2]>0){
                        minIndex=c2;
                }
                c2++;
        }
        remBt[minIndex]=remBt[minIndex]-1;
        if (remBt[minIndex]==0){
                count++;
                tt[minIndex]=pt-at[minIndex];
                wt[minIndex]=tt[minIndex]-bt[minIndex];
                c[minIndex]=pt;
        }
        c1++;
```

```
        }
        printf("\nPName CT TT WT\n");
        for(int i=0;i<n;i++){
                printf("%s %d %d %d\n",process[i],c[i],tt[i],wt[i]);
        }
}
```

```
akib_zab@akib:~/Desktop$ gcc -o t3 t3.c
akib_zab@akib:~/Desktop$ ./t3
Enter total number of Process: 5
Enter the Process names arrival time,brust time and priority:
p1 0 15 2
Enter the Process names arrival time,brust time and priority:
p2 14 5 4
Enter the Process names arrival time,brust time and priority:
p3 3 10 0
Enter the Process names arrival time,brust time and priority:
p4 9 22 3
Enter the Process names arrival time,brust time and priority:
p5 7 16 1

PName CT TT WT
p1 41 41 26
p3 13 10 0
p5 29 22 6
p4 63 54 32
p2 68 54 49
akib_zab@akib:~/Desktop$
```