OS Lab Assignment :

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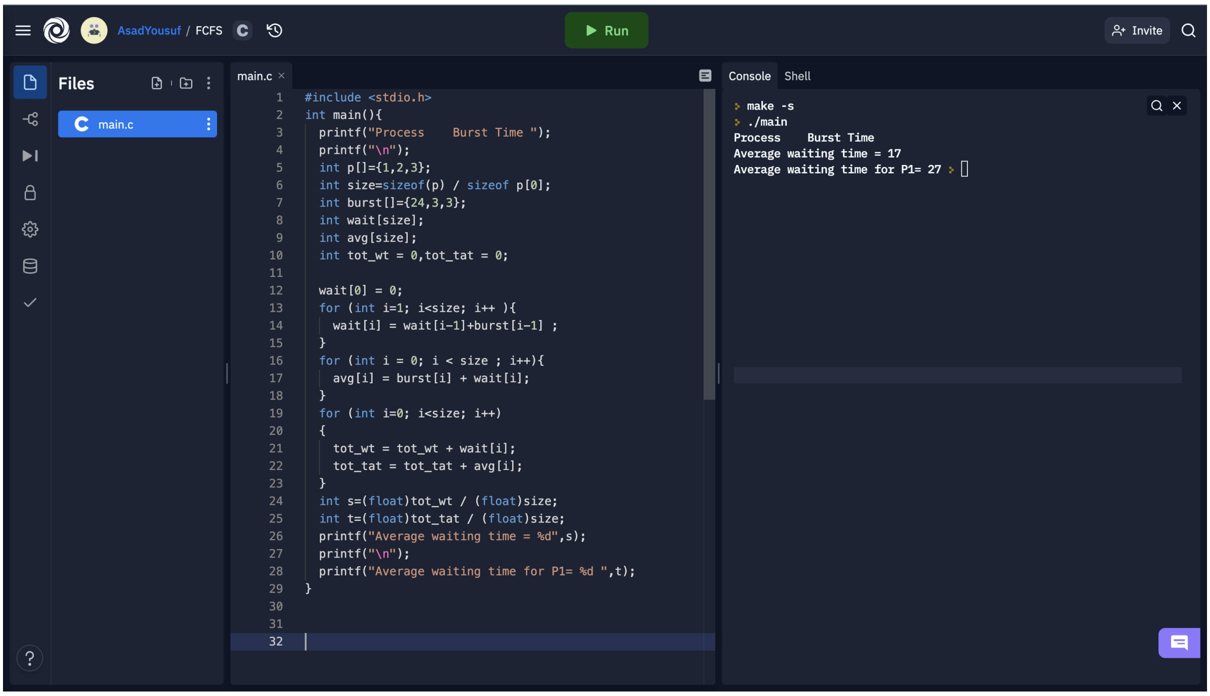
Section : IT

Question 1 : FCFS Algorithm

```
#include <stdio.h>
int main(){
  printf("Process    Burst Time ");
  printf("\n");
  int p[]={1,2,3};
  int size=sizeof(p) / sizeof p[0];
  int burst[]={24,3,3};
  int wait[size];
  int avg[size];
  int tot_wt = 0,tot_tat = 0;

  wait[0] = 0;
  for (int i=1; i<size; i++ ){
    wait[i] = wait[i-1]+burst[i-1] ;
  }
  for (int i = 0; i < size ; i++){
    avg[i] = burst[i] + wait[i];
  }
  for (int i=0; i<size; i++)
  {
    tot_wt = tot_wt + wait[i];
    tot_tat = tot_tat + avg[i];
  }
  int s=(float)tot_wt / (float)size;
  int t=(float)tot_tat / (float)size;
```

```
    printf("Average waiting time = %d",s);
    printf("\n");
    printf("Average waiting time for P1= %d ",t);
}
```



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  int wait[size];
  int avg[size];
  int tot_wt = 0,tot_tat = 0;

  wait[0] = 0;
  for (int i=1; i<size; i++ ){
    wait[i] = wait[i-1]+burst[i-1] ;
  }
  for (int i = 0; i < size ; i++){
    avg[i] = burst[i] + wait[i];
  }
  for (int i=0; i<size; i++)
  {
    tot_wt = tot_wt + wait[i];
    tot_tat = tot_tat + avg[i];
  }
  int s=(float)tot_wt / (float)size;
  int t=(float)tot_tat / (float)size;
  printf("Average waiting time = %d",s);
  printf("\n");
  printf("Average waiting time for P1= %d ",t);
}
```

```
> make -s
> ./main
Process    Burst Time
Average waiting time = 17
Average waiting time for P1= 27 >
```

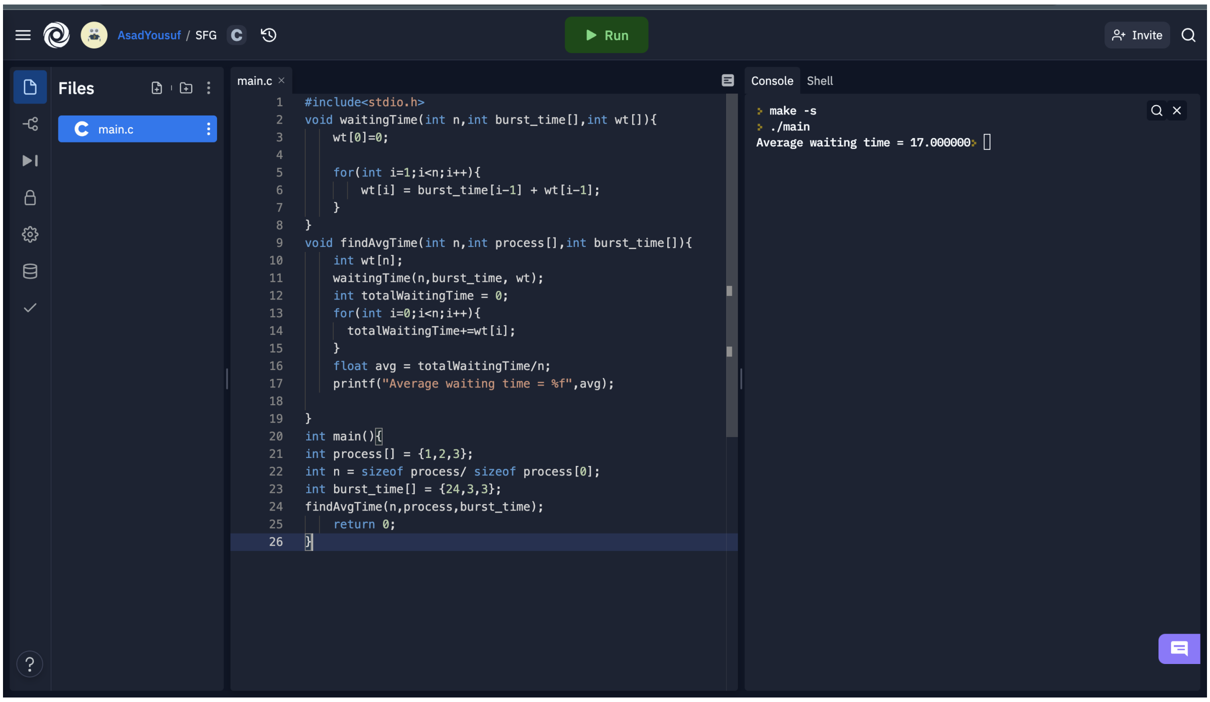
Question 2 : SJF Algorithm

```
#include<stdio.h>
void waitingTime(int n,int burst_time[],int wt[]){
    wt[0]=0;

    for(int i=1;i<n;i++){
        wt[i] = burst_time[i-1] + wt[i-1];
    }
}
void findAvgTime(int n,int process[],int burst_time[]){
    int wt[n];
    waitingTime(n,burst_time, wt);
    int totalWaitingTime = 0;
    for(int i=0;i<n;i++){
      totalWaitingTime+=wt[i];
    }
    float avg = totalWaitingTime/n;
    printf("Average waiting time = %f",avg);

}
int main(){
int process[] = {1,2,3};
int n = sizeof process/ sizeof process[0];
int burst_time[] = {24,3,3};
findAvgTime(n,process,burst_time);
```

```
    return 0;
}
```



```
#include<stdio.h>
void waitingTime(int n,int burst_time[],int wt[]){
    wt[0]=0;

    for(int i=1;i<n;i++){
        wt[i] = burst_time[i-1] + wt[i-1];
    }
}
void findAvgTime(int n,int process[],int burst_time[]){
    int wt[n];
    waitingTime(n,burst_time, wt);
    int totalWaitingTime = 0;
    for(int i=0;i<n;i++){
      totalWaitingTime+=wt[i];
    }
    float avg = totalWaitingTime/n;
    printf("Average waiting time = %f",avg);

}
int main(){
int process[] = {1,2,3};
int n = sizeof process/ sizeof process[0];
int burst_time[] = {24,3,3};
findAvgTime(n,process,burst_time);
    return 0;
}
```

```
> make -s
> ./main
Average waiting time = 17.000000>
```