FCFS.java

```
import java.util.Scanner;
class FCFS {
   // Function to find the waiting time for all
   // processes
   static void findWaitingTime(int processes[], int n,
                               int bt[], int wt[]) {
      // waiting time for first process is 0
      wt[0] = 0;
      // calculating waiting time
      for (int i = 1; i < n; i++) {
         wt[i] = bt[i - 1] + wt[i - 1];
      }
   }
   // Function to calculate turn around time
   static void findTurnAroundTime(int processes[], int n,
                                  int bt[], int wt[], int tat[]) {
      // calculating turn around time by adding
      // bt[i] + wt[i]
      for (int i = 0; i < n; i++) {
         tat[i] = bt[i] + wt[i];
      }
   }
   //Function to calculate average time
   void findavgTime(int processes[], int n, int bt[]) {
      int wt[] = new int[n], tat[] = new int[n];
      int total_wt = 0, total_tat = 0;
      //Function to find waiting time of all processes
      findWaitingTime(processes, n, bt, wt);
      //Function to find turn around time for all processes
      findTurnAroundTime(processes, n, bt, wt, tat);
      //Display processes along with all details
      System.out.printf("Processes Burst time Waiting"
            +" time Turn around time\n");
      // Calculate total waiting time and total turn
      // around time
      for (int i = 0; i < n; i++) {
         total_wt = total_wt + wt[i];
         total_tat = total_tat + tat[i];
         System.out.printf(" %d ", (i + 1));
         System.out.printf(" %d ", bt[i]);
         System.out.printf(" %d", wt[i]);
         System.out.printf(" %d\n", tat[i]);
      }
      float s = (float)total_wt /(float) n;
      int t = total_tat / n;
      System.out.printf("Average waiting time = %f", s);
      System.out.printf("\n");
      System.out.printf("Average turn around time = %d ", t);
   }
}
//Shortest Remaining Time First(SJF preemptive)
class Process
{
```

```
    int pid; // Process ID
    int bt; // Burst Time
    int art; // Arrival Time

    public Process(int pid, int bt, int art)
    {
        this.pid = pid;
        this.bt = bt;
        this.art = art;
    }
}
```