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**LOVELY PROFESSIONAL UNIVERSITY**

**OPERATING SYSTEM**

**Course:CSE-316**

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**GitHub Link:** <https://github.com/Bardhavar> Ravindhar/Os-project.github

Problem:

**Ques18**.Ten students (a,b,c,d,e,f,g,h,i,j) are going to attend an event. There are lots of gift shops, they all are going to the gift shops and randomly picking the gifts. After picking the gifts they are randomly arriving in the billing counter. The accountant gives the preference to that student who has maximum number of gifts. Create a C or Java program to define order of billed students?

**Ans:**

Priority scheduling is one of the most common scheduling algorithms in batch systems. Each process is assigned a priority. Process with the highest priority is to be executed first and so on. Processes with the same priority are executed on first come first served basis. Priority can be decided based on memory requirements, time requirements or any other resource requirement.

**Implementation :**

1- First input the processes with their burst time and priority.

2- Sort the processes, burst time and priority according to the priority.

3- Now simply apply [FCFS](https://www.geeksforgeeks.org/program-fcfs-scheduling-set-1/) algorithm.

**Description:**

To implement the above problem we have to make three iterations in which first iteration with a time slice of X units reduce the burst time of each process by X. In second iteration -waiting time of each process.

Code:

//Question no -18 Bardhavar Ravindhar

**#include<stdio.h>**

**#include<conio.h>**

**#include<string.h>**

**void main()**

**{**

**char p[10][5],temp[5];**

**int i,j,pt[10],wt[10],totwt=0,pr[10],temp1,n;**

**float avgwt;**

**printf("Enter no of students:");**

**scanf("%d",&n);**

**for(i=0;i<n;i++)**

**{**

**printf("Enter Student %d name:",i+1);**

**scanf("%s",&p[i]);**

**printf("Enter process time:");**

**scanf("%d",&pt[i]);**

**printf("enter no of gifts:");**

**scanf("%d",&pr[i]);**

**}**

**for(i=0;i<n-1;i++)**

**{**

**for(j=i+1;j<n;j++)**

**{**

**if(pr[i]>pr[j])**

**{**

**temp1=pr[i];**

**pr[i]=pr[j];**

**pr[j]=temp1;**

**temp1=pt[i];**

**pt[i]=pt[j];**

**pt[j]=temp1;**

**strcpy(temp,p[i]);**

**strcpy(p[i],p[j]);**

**strcpy(p[j],temp);**

**}**

**}**

**}**

**wt[0]=0;**

**for(i=1;i<n;i++)**

**{**

**wt[i]=wt[i-1]+wt[i-1];**

**totwt=totwt+wt[i];**

**}**

**avgwt=(float)totwt/n;**

**printf("S\_name\t P\_time\t No.Gifts\tW\_time\n");**

**for(i=0;i<n;i++)**

**{**

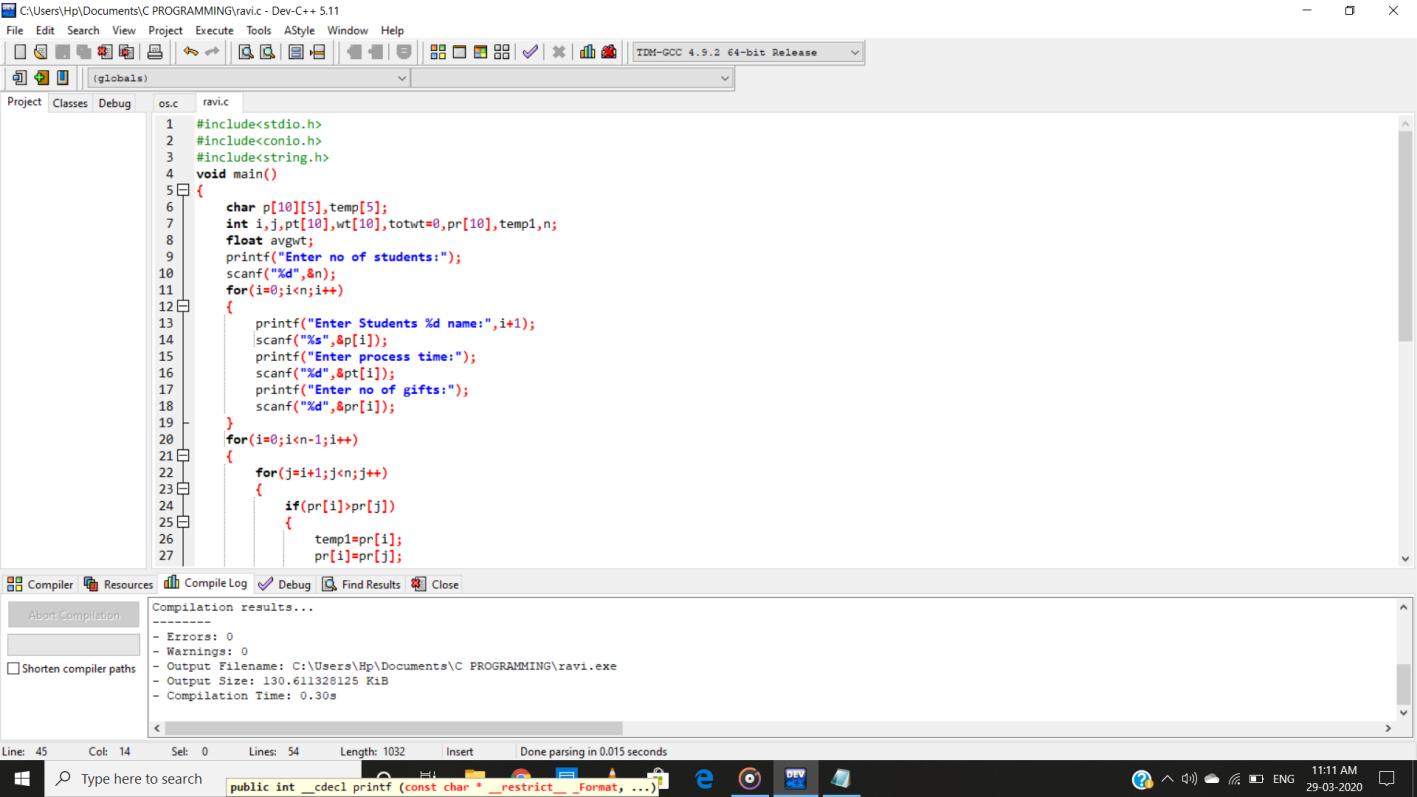
**printf(" %s\t %d\t %d\t \t%d\n" ,p[i],pt[i],pr[i],wt[i]);**

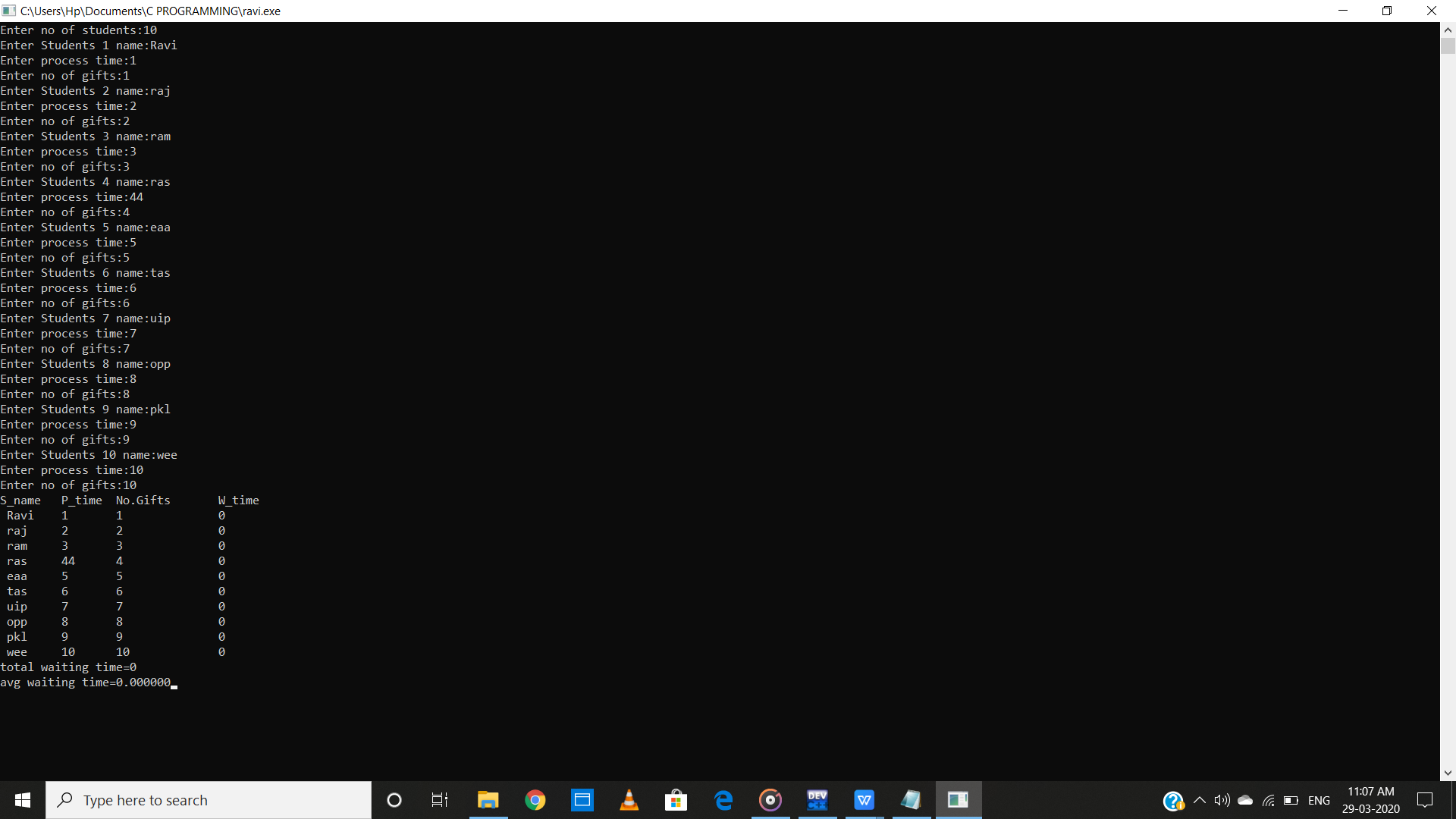
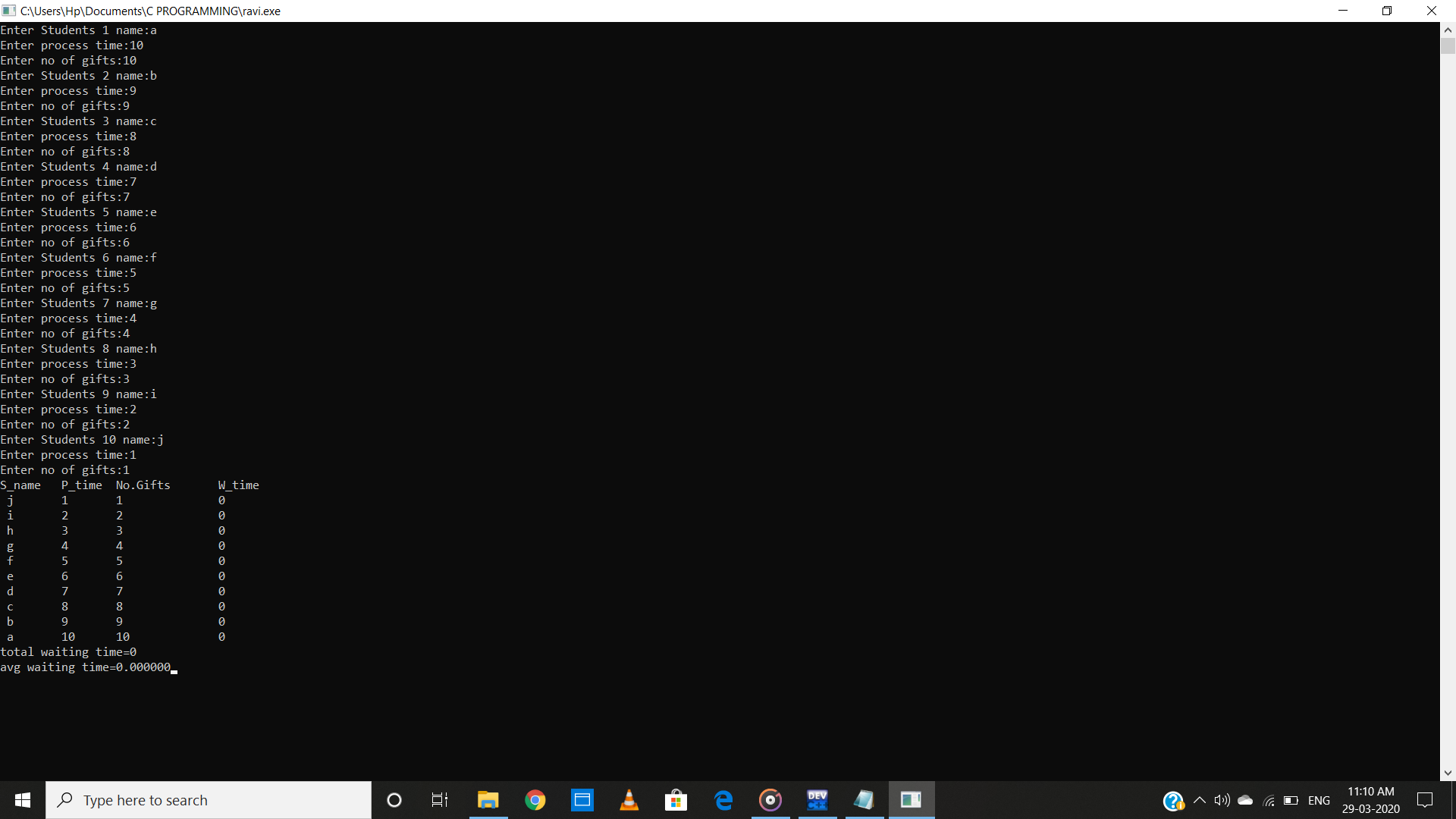
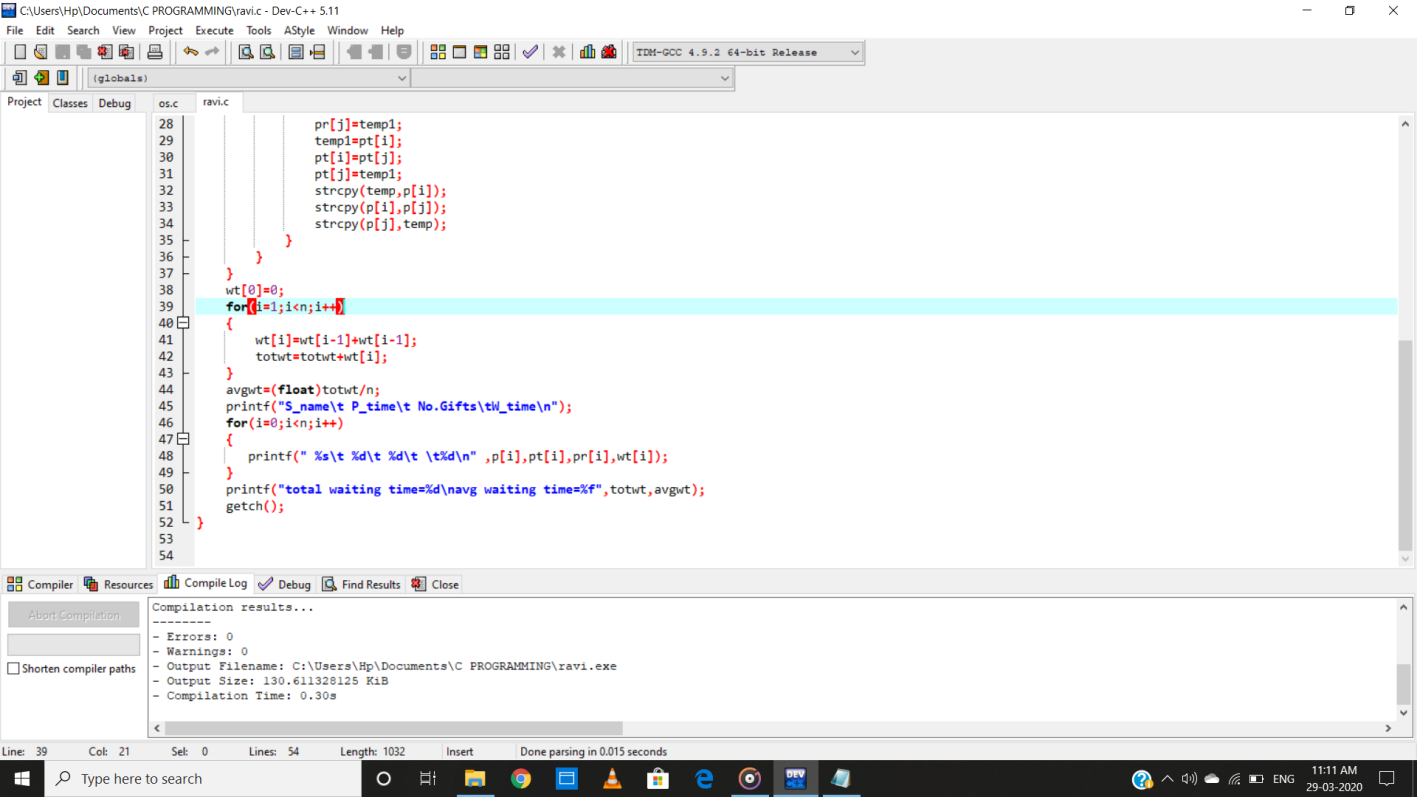
**}**

**printf("total waiting time=%d\navg waiting time=%f",totwt,avgwt);**

**getch();**

**}**

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