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Course – BSCIT
Subject – Operating System
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Date – 22/6/21

Solve2)

```
# include <stdio.h>
# include <conio.h>
# include <string.h>
void main()
{
  int ct [20], at [10], n, i, j, temp, st [10], ft [10], ta[10];
  int totwt = 0, totta = 0;
  float awt, ata;
  char pn [10][10], t[10];
  // clrscr ();
  printf ("Enter the number of process : ");
  scanf ("%d", &n);
  for (i=0 ; i<n ; i++)
  {
   Printf ("Enter process name, arrival time &
            execution time :");
   //flushall ();
   scanf ("%s%d%d", pn[i], &at[i], &et[i]);
  }
  for (i=0 ; i<n ; i++)
    for (j=0 ; j<n ; j++)
    {
      if (et[i] < et[j])
      {
        temp = at[i];
```

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```
        at[i] = at[j];
        at[j] = temp;
        temp = et[i];
        et[i] = e[j];
        et[j] = temp;
        Strcpy(t, pn[i]);
        Strcpy(pn[i], pn[j]);
        Strcpy(pn[j], t);
      }
    }
  for(i=0; i<n; i++
if(i==0)
  st[i] = at[i];
else
  st[i] = ft[i-1]
  wt[i] = st[i] - at[i];
  ft[i] = st[i] + et[i];
  ta[i] = ft[i] - at[i];
  totwt += wt[i];
  totta += ta[i];
}
awt = (float) totwt/n;
ata = (float) totta/n;
printf("\n Pname \t arrivaltime \t executiontime
\t waiting time \t tatime ");
for(i=0; i<n; i++)
printf("\n %5 \t %5d \t %5d \t %5d \t %5d",
    pn[i], at[i], et[i], wt[i], ta[i]);
```

```
printf ("\n Average waiting time is :%.f",awt);
printf ("\n Averge turnaraund time is:%.f",atv);
getch ();
}
```

Out put:

Enter the number of processor : 4
Enter process name, arrival time & execution time:
: P1 0 10
Enter process name, arrival time & execution.
: P2 0 2
Enter process name, arrival time & execution.
: P3 0 1
Enter process name, arrival time & execution
: P4 0 4

Priame	arrivial time	exection time	wating time	tot tim
P3	0	1	0	1
P2	0	2	1	3
P4	0	64	3	7
P1	0	10	7	17

Average waiting time — 2.750000
Average turnaround time is 7.000000

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```
                et[j]=temp;
                strcpy(t,pn[i]);
                strcpy(pn[i],pn[j]);
                strcpy(pn[j],t);
            }
        }
```

input

```
Enter the number of process:4
Enter process name, arrival time& execution time:p1 0 10
Enter process name, arrival time& execution time:p2 0 2
Enter process name, arrival time& execution time:p3 0 1
Enter process name, arrival time& execution time:p4 0 4

Pname    arrivaltime      executiontime    waitingtime      tatime
p3           0                1                0               1
p2           0                2                1               3
p4           0                4                3               7
p1           0               10                7              17
Average waiting time is:2.750000
Average turnaroundtime is:7.000000

...Program finished with exit code 0
Press ENTER to exit console.
```