/\*

# PROGRAM TO IMPLEMENT FCFS SCHEDULING ALGORITHM

Ashis Solomon

CS4B 17

MDL20CS035

\*/

**CODE:**

#include <stdio.h>

#include <stdlib.h>

int n, i, j, temp = 0, t, completionTime[10], tat[10], wt[10], burst[10] = {0}, arrival[10] = {0}, order[10] = {0};

float total\_tat = 0, total\_wt = 0;

void swap(int \*xp, int \*yp)

{

int t = \*xp;

\*xp = \*yp;

\*yp = t;

}

void Sort(int arr[], int n)

{

int i, j;

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

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

if (arr[i] > arr[j])

{

swap(&arrival[i],&arrival[j]);

swap(&burst[i], &burst[j]);

swap(&order[i], &order[j]);

}

}

int main()

{

printf("\n-------------------------------");

printf("\nPROGRAM : FIRST COME FIRST SERVE \n\n");

printf("---------------------------------\n");

printf("Enter no of process : ");

scanf("%d", &n);

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

{

printf("\nArrival time of process %d is :", i);

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

printf("\nBurst time of process %d is :", i);

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

order[i] = i;

}

Sort(arrival, n);

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

{

if (i == 1)

{

temp = burst[i] + arrival[1];

completionTime[i] = temp;

tat[i] = completionTime[i] - arrival[i];

wt[i] = tat[i] - burst[i];

total\_tat = total\_tat + tat[i];

}

else

{

temp = temp + burst[i];

completionTime[i] = temp;

tat[i] = completionTime[i] - arrival[i];

wt[i] = tat[i] - burst[i];

if (wt[i] < 0)

{

completionTime[i] = completionTime[i] + abs(wt[i]);

temp = completionTime[i];

tat[i] += abs(wt[i]);

wt[i] = 0;

}

total\_wt = total\_wt + wt[i];

total\_tat = total\_tat + tat[i];

}

}

total\_wt = total\_wt / n;

total\_tat = total\_tat / n;

printf("\norder in which process get executed :\t");

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

{

printf("%d \t ", order[i]);

}

printf("\n\n arrival\_time Burst\_time Turn\_around\_time waiting\_time completion time");

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

{

printf("\nprocess%d %d %d %d %d %d", order[i], arrival[i], burst[i], tat[i], wt[i], completionTime[i]);

}

printf("\n\n Average waiting time is %.2f", total\_wt);

printf("\n Average turn around time is is %.2f\n", total\_tat);

}

**OUTPUT:**

