**PROGRAMS :**

**1. FCFS Scheduling**

Input:

#include<iostream>

#include<conio.h>

using namespace std;

void main()

{

int p[10], at[10], bt[10], ft[10], tat[10], wt[10], n, temp = 0;

float atat = 0, awt = 0;

cout << "Enter the no. of Processes:";

cin >> n;

cout << "Enter the process no.:";

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

cin >> p[i];

cout << "Enter the arrival time:";

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

cin >> at[i];

cout << "Enter the burst time:";

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

cin >> bt[i];

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

{

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

{

if (at[j] > at[j + 1])

{//sort proceess no acc to at

temp = p[j + 1];

p[j + 1] = p[j];

p[j] = temp;

// sort at

temp = at[j + 1];

at[j + 1] = at[j];

at[j] = temp;

//sort bt

temp = bt[j + 1];

bt[j + 1] = bt[j];

bt[j] = temp;

}

}

}

//finishing time

ft[1] = at[1] + bt[1];

for (int i = 2; i <= n; i++)

{

if (ft[i - 1] < at[i])

temp = at[i] - ft[i - 1];

ft[i] = ft[i - 1] + bt[i] + temp;

}

cout << "P.id" << "\t" << "AT" << "\t" << "BT" << "\t"<<"FT"<<"\t" << "TAT" << "\t" << "WT" << "\n";

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

{

tat[i] = ft[i] - at[i];

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

atat += tat[i];

awt += wt[i];

}

atat /= n;

awt /= n;

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

cout << "p" << p[i] << "\t" << at[i] << "\t" << bt[i] << "\t" << ft[i] << "\t" << tat[i] << "\t" << wt[i] << "\n";

cout << "\nAverage Turnaround Time:" << atat;

cout << "\n Average Waiting Time" << awt;

cout << "\nGnatt Graph\n";

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

{

for (int j = bt[i]; j > 0; j--)

cout << "-";

cout << ".";

}

cout << "\n|";

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

{

cout << "P " << p[i];

for (int j = (bt[i] - 2); j > 0; j--)

cout << " ";

cout << "|";

}

cout << "\n.";

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

{

for (int j = bt[i]; j > 0; j--)

cout << "-";

cout << ".";

}

\_getch();

}

Output:

