# PROGRAM

***FCFS CPU SCHEDULING ALGORITHM***

#include<stdio.h> #include<conio.h>

main()

{

int bt[20], wt[20], tat[20], i, n; float wtavg, tatavg; clrscr();

printf("\nEnter the number of processes -- "); scanf("%d", &n);

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

{

printf("\nEnter Burst Time for Process %d -- ", i); scanf("%d", &bt[i]);

}

wt[0] = wtavg = 0; tat[0] = tatavg = bt[0]; for(i=1;i<n;i++)

{

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

tat[i] = tat[i-1] +bt[i]; wtavg = wtavg + wt[i]; tatavg = tatavg + tat[i];

}

printf("\t PROCESS \tBURST TIME \t WAITING TIME\t TURNAROUND TIME\n");

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

printf("\n\t P%d \t\t %d \t\t %d \t\t %d", i, bt[i], wt[i], tat[i]); printf("\nAverage Waiting Time -- %f", wtavg/n);

printf("\nAverage Turnaround Time -- %f", tatavg/n); getch();

}

# SJF CPU SCHEDULING ALGORITHM

#include<stdio.h> #include<conio.h> main()

{

int p[20], bt[20], wt[20], tat[20], i, k, n, temp; float wtavg, tatavg; clrscr();

printf("\nEnter the number of processes -- "); scanf("%d", &n);

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

{

p[i]=i;

printf("Enter Burst Time for Process %d -- ", i); scanf("%d", &bt[i]);

}

for(i=0;i<n;i++) for(k=i+1;k<n;k++) if(bt[i]>bt[k])

{

temp=bt[i]; bt[i]=bt[k]; bt[k]=temp;

}

wt[0] = wtavg = 0; tat[0] = tatavg = bt[0]; for(i=1;i<n;i++)

{

temp=p[i]; p[i]=p[k]; p[k]=temp;

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

tat[i] = tat[i-1] +bt[i]; wtavg = wtavg + wt[i]; tatavg = tatavg + tat[i];

}

printf("\n\t PROCESS \tBURST TIME \t WAITING TIME\t TURNAROUND TIME\n");

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

printf("\n\t P%d \t\t %d \t\t %d \t\t %d", p[i], bt[i], wt[i], tat[i]); printf("\nAverage Waiting Time -- %f", wtavg/n); printf("\nAverage Turnaround Time -- %f", tatavg/n);

}

**ROUND ROBIN CPU SCHEDULING ALGORITHM**

#include<stdio.h> main()

{

int i,j,n,bu[10],wa[10],tat[10],t,ct[10],max; float awt=0,att=0,temp=0;

printf("Enter the no of processes -- "); scanf("%d",&n);

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

{

printf("\nEnter Burst Time for process %d -- ", i+1); scanf("%d",&bu[i]);

ct[i]=bu[i];

}

printf("\nEnter the size of time slice -- "); scanf("%d",&t);

max=bu[0]; for(i=1;i<n;i++) if(max<bu[i])

max=bu[i]; for(j=0;j<(max/t)+1;j++) for(i=0;i<n;i++) if(bu[i]!=0)

if(bu[i]<=t)

{

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

{

}

else

{

}

tat[i]=temp+bu[i]; temp=temp+bu[i]; bu[i]=0; bu[i]=bu[i]-t; temp=temp+t;

wa[i]=tat[i]-ct[i]; att+=tat[i]; awt+=wa[i];

}

printf("\nThe Average Turnaround time is -- %f",att/n); printf("\nThe Average Waiting time is -- %f ",awt/n);

printf("\n\tPROCESS\t BURST TIME \t WAITING TIME\tTURNAROUND TIME\n");

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

printf("\t%d \t %d \t\t %d \t\t %d \n",i+1,ct[i],wa[i],tat[i]); getch();

}

# PRIORITY CPU SCHEDULING ALGORITHM

#include<stdio.h> main()

{

int p[20],bt[20],pri[20], wt[20],tat[20],i, k, n, temp; float wtavg, tatavg; clrscr();

printf("Enter the number of processes --- "); scanf("%d",&n);

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

{

p[i] = i;

printf("Enter the Burst Time & Priority of Process %d --- ",i); scanf("%d %d",&bt[i], &pri[i]);

}

for(i=0;i<n;i++) for(k=i+1;k<n;k++) if(pri[i] > pri[k])

{

temp=p[i]; p[i]=p[k]; p[k]=temp;

temp=bt[i]; bt[i]=bt[k]; bt[k]=temp; temp=pri[i]; pri[i]=pri[k]; pri[k]=temp;

}

wtavg = wt[0] = 0; tatavg = tat[0] = bt[0]; for(i=1;i<n;i++)

{

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

tat[i] = tat[i-1] + bt[i];

wtavg = wtavg + wt[i]; tatavg = tatavg + tat[i];

}

printf("\nPROCESS\t\tPRIORITY\tBURST TIME\tWAITING TIME\tTURNAROUND TIME");

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

printf("\n%d \t\t %d \t\t %d \t\t %d \t\t %d ",p[i],pri[i],bt[i],wt[i],tat[i]); printf("\nAverage Waiting Time is --- %f",wtavg/n);

printf("\nAverage Turnaround Time is --- %f",tatavg/n); getch();

}