write a C program to simulate multi-level queue scheduling algorithm considering the following scenario. All the processes in the system are divided into two categories - system processes and user processes. System processes are to be given higher priority than user processes. Use FCFS scheduling for the processes in each queue.

#include 2stdio.hs

void main ()

int p[20], bt[20], su[20], wt[20], tat[20], at[20], at[20], i, k, n, temp;

print ("Enter the number of processes:"); ecan ("./.d", &n);

fox(1=0;i20;i4+)

p[i] = i;

point ("Entor the Arrival Time of Process 1.d"; i);
ecan (" ./d", & a + [i]);

scanf ("Finter the Rurad Time of Proces 7.d";);

scanf ("-/-d", 6 su[4]);

for (i=0; izn; i++)

for (k=ial; ken; k++)

```
if (at [i] > at [k] 1) (at [i] = at [k] & 8 50[] > 50[]
          temp = p[i];
          pCiJ=p(KJ;
          p[K] = temp;
March Hartempt 6+ (T) more all place
          HCJ = bt [k]; man }
         bot[k]: temp; and allo
       temp = suli];
1 1 1 20 CKT = temp; 1/1/
         temp = at (1);
         at [i] = at [k];
        at The Je Hernipine marchal Millians
         rivel ( between the observed time
wtavg = wt [0]=0 inspect salar att salar
tatarg = tat [o] = 6-10];
of to] = atto] + bt to]; nie besod nat sobord
Enter the masses time of factor 1:00 b
    Cotting catting) was a sold
 cottil = adtil+b+til; de colar
  else c+[i]=c+[i-1]+b+[D];
  wt [i] = c+[i] - a+[i] - b+[i];
  tat[i]: c+[i] - a+[i];
```

```
warg + = wt Ci J,
                               tatli] = ctli]-atli];
                              tatang + = tat [i];
               prints ("In PROCESS It I HARRIVAL TIME I + SYSTEM ) USE & PROCESS I SURST TIME (+ WAITING TIME I + TURNAROUND TIME"):
              100(1=0;izn;i+4)
                        point[("Inv.dit 1+1+./d 1+1+1+./d 1+1+./d 1+./d 1+./
print[("Influerage Waiting Pime is 1.6", wtavg/n);
print[("Influerage Purntround Pime is 1.6", tarlang/n);
output :-
Enter the number processes: 4

Enter the Assival Fime of Process 0: 0

Enter the Burst Time of Process 0: 2
  system/used Process (0/1)? 100
  Enter the Arrival Pime of Process 1:0

Enter the Bussi Time of Process 1:1
   system /User Process (01) ?: 1
   Enter the Arrival Time of Process 2:0
  Enter the Burst Time of Process 2: 5
  3/stemluser Process (011):0:0
 Enter the Arrival Pime of Process 2:0
Enter the Busst Time of Process 3:3
  system/user Process (0/1)?:
```

				SURYA Gold Date Page		
	PROVESS	ARRIVAL TIME	SYSTEM/USER PROCESS	BURST TIME	Page————————————————————————————————————	Turnstroud time
	0	0	PRUCESS	2	0	2
	2	0	0	5	ع	7
	1	0	1	1	7	8
	3	0	1	3	8	1)
	Average	waiting time is	14-250	500		
	Average waiting rime is: 4-250000 Average Pornarourd Pine is: 7-000000					
+						
Cho Colo	re		TO I			
6/6						
			-			
- 11						