int p,i,j,c=0,x=0,available;

int allocation[10],max[10],need[10],flag[10],sequence[10];

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

printf("Enter the number of process : ");

scanf("%d",&p); printf("----------------------------------\n");

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

{

flag[i]=0; //initially no process's need is fulfilled

}

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

{

printf("\nEnter the ALLOCATION for process P[%d] : ",i);

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

printf("Enter the MAX for process P[%d] : ",i);

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

}

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

printf("Enter the AVAILABLE resources :");

scanf("%d",&available); printf("----------------------------------\n");

for

(i=0;i<p;i++)

{

need[i]=max[i]-allocation[i];

}

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

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

{

printf("Need of P[%d] is : %d\n",i,need[i]);

}

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

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

{

for(j=0;j<p;j++)

{

if(flag[j]==0 && need[j]<=available)

{

available=available+allocation[j];

flag[j]=1;

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

printf("Process %d has been allocated resources",j);

sequence[c]=j;

c++;

}

}

}

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

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

{

if(flag[i]==0)

{

printf("\n\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

printf("\t\tSYSTEM IS IN UNSAFE STATE\n"); printf("\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

x=1;

break;

}

}

if(x==0)

{

printf("\n\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

printf("\t\tSYSTEM IS IN SAFE STATE\n"); printf("\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

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

printf("Safe sequence is : ");

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

{

printf("P[%d] ",sequence[i]); } printf("\n-------------------------------------\n");

}