**Program**

#include<stdio.h>

#include<stdlib.h>

void main() {

int n,r,i,j,k=0,c=0,f=0,exec=0;

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

scanf("%d",&n);

int vis[n];

int a[n];

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

scanf("%d",&r);

int alloc[n][r],max[n][r],avail[r],need[n][r];

printf("Enter the available resources : ");

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

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

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

vis[i]=0;

printf("Enter the max of the process P%d : ",i);

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

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

printf("Enter the allocation of the process P%d : ",i);

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

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

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

need[i][j]=max[i][j]-alloc[i][j];

}

printf("\nAllocation Max Need\n");

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

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

printf("%d ",alloc[i][j]);

printf("\t\t");

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

printf("%d ",max[i][j]);

printf("\t");

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

printf("%d ",need[i][j]);

printf("\n");

}

while(c<n) {

f=0;

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

exec=0;

for(j=0;j<r;j++) {

if(need[i][j]<=avail[j])

exec++;

}

if(exec==r&&vis[i]==0) {

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

avail[j]+=alloc[i][j];

f=1;

vis[i]=1;

c++;

a[k++]=i;

}

}

if(f==0) {

printf("No safe sequence!!");

exit(0);

}

}

printf("\nSafe Sequence : \n");

printf("<");

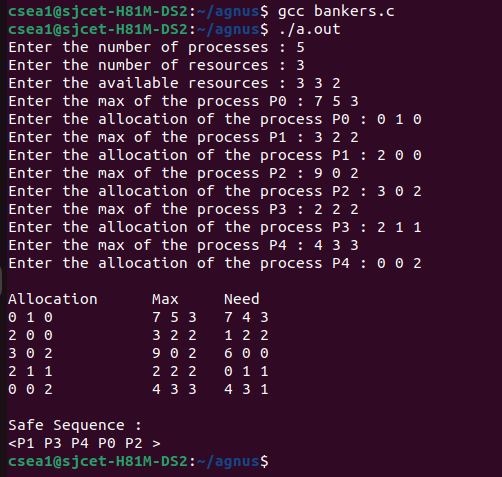
for(i=0;i<n;i++)

printf("P%d ",a[i]);

printf(">\n");

}

**Output**

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