

deadlock

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main.c Run Output Clear

```
1 #include<stdio.h>
2 static int mark[20];
3 int i, j, np, nr;
4 int main()
5 {
6 int alloc[10][10],request[10][10],avail[10],r[10],w[10];
7 printf("\nEnter the no of the process: ");
8 scanf("%d",&np);
9 printf("\nEnter the no of resources: ");
10 scanf("%d",&nr);
11 for(i=0;i<nr; i++)
12 {
13 printf("\nTotal Amount of the Resource R % d: ",i+1);
14 scanf("%d", &r[i]);
15 }
16 printf("\nEnter the request matrix:");
17 for(i=0;i<np;i++)
18 for(j=0;j<nr;j++)
19 scanf("%d",&request[i][j]);
20 printf("\nEnter the allocation matrix:");
21 for(i=0;i<np;i++)
22 for(j=0;j<nr;j++)
23 scanf("%d",&alloc[i][j]);
24 for(j=0;j<nr;j++)
25 {
26 avail[j]=r[j];
27 for(i=0;i<np;i++)
```

/tmp/3q03fLmRgg.o
Enter the no of the process: 3
Enter the no of resources: 3
Total Amount of the Resource R 1: 1
Total Amount of the Resource R 2: 2
Total Amount of the Resource R 3: 0
Enter the request matrix:3 6 8
4 3 3
3 4 4
Enter the allocation matrix:3 3 3
2 0 3
1 2 4
Deadlock detected

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```
26 avail[j]=r[j];
27 for(i=0;i<np;i++)
28 {
29 avail[j]-=alloc[i][j];
30 }
31 }
32 for(i=0;i<np;i++)
33 {
34 int count=0;
35 for(j=0;j<nr;j++)
36 {
37 if(alloc[i][j]==0)
38 count++;
39 else
40 break;
41 }
42 if(count==nr)
43 mark[i]=1;
44 }
45 for(j=0;j<nr; j++)
46 w[j]=avail[j];
47
48 for(i=0;i<np; i++)
49 {
50 int canbeprocessed= 0;
51 if(mark[i]!=1)
```

/tmp/3q03fLmRgg.o
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Total Amount of the Resource R 1: 1
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Enter the request matrix:3 6 8
4 3 3
3 4 4
Enter the allocation matrix:3 3 3
2 0 3
1 2 4
Deadlock detected

main.c



Run

Output

Clear

```

53     for(j=0;j<nr;j++)
54     {
55         if(request[i][j]<=w[j])
56             canbeprocessed=1;
57         else
58         {
59             canbeprocessed=0;
60             break;
61         }
62     }
63     if(canbeprocessed)
64     {
65         mark[i]=1;
66         for(j=0;j<nr;j++)
67             w[j]+=alloc[i][j];
68     }
69 }
70 }
71 int deadlock=0;
72 for(i=0;i<np;i++)
73     if(mark[i]!=1)
74         deadlock=1;
75 if(deadlock)
76     printf("\n Deadlock detected");
77 else
78     printf("\n No Deadlock possible");
79 }

```

```

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Enter the no of the process: 3
Enter the no of resources: 3
Total Amount of the Resource R 1: 1
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Total Amount of the Resource R 3: 0
Enter the request matrix:3 6 8
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3 4 4
Enter the allocation matrix:3 3 3
2 0 3
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Deadlock detected

```