

Online C Compiler

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main.c

Run

```
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++)
```


Output


Clear

```
/tmp/j4RrX03cfU.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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Clear

```


27  tor(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)
52    {
53      for(j=0;j<nr;j++)

```


```


/tmp/j4RrX03cfU.o
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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Clear

```

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;if
75 (deadlock)
76     printf("\n Deadlock detected");
77 else
78     printf("\n No Deadlock possible");
79 }
80

```

```

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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
Total Amount of the Resource R 2: 2
Total Amount of the Resource R 3: 0
Enter the request matrix:3 6 8
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Deadlock detected

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