

```
1.  /** Bitmask DP by Shadman */
2.  using namespace std;
3.  #include "cstring"
4.  #include "cstdio"
5.  #include "iostream"
6.  #include "algorithm"
7.  #include "vector"
8.  #include "string"
9.  #include "ctype"
10. #include "set"
11. int Set(int N,int pos){return N=N | (1<<pos);}
12. int reset(int N,int pos){return N= N & ~(1<<pos);}
13. bool check(int N,int pos){return (bool)(N & (1<<pos));}
14. int dp[20][1<<17];
15. int biye[20][20],a;
16. int bit(int i,int mask)
17. {
18.     if(dp[i][mask]!=-1)return dp[i][mask];
19.     if(i==a)return 0;
20.     int mx=-1;
21.
22.     for(int j=0;j<a;j++)
23.     {
24.         if(check(mask,j)==0)
25.             { int pr=biye[i][j];
26.
27.                 mx=max(mx,pr+bit(i+1,Set(mask,j)));
28.
29.             }
30.     }
31.     return dp[i][mask]=mx;
32. }
33. int main()
34. {
35.     int b,c,p,q,r,x,y,z,i,j,k,d;
36.
37.     cin>>b;
38.     for(i=1;i<=b;i++)
39.     {
40.         scanf("%d",&a);
41.         for(j=0;j<20;j++)
42.             memset(dp[j],-1,sizeof(dp[j]));
43.         for(j=0;j<a;j++)
44.         {
45.             for(k=0;k<a;k++)
46.                 scanf("%d",&biye[j][k]);
47.         }
48.
49.
50.
51.         printf("Case %d: %d",i,bit(0,0));
52.         cout<<endl;
53.     }
54.     return 0;
55. }
```