

```

1  #include <stdio.h>
2  #include <conio.h>
3
4  int j,i,count=0;
5  int p[100], pi[100];
6  int dir[100];
7
8  void PrintPerm()
9  {
10     int i;
11
12     count = count + 1;
13     printf( "\n[%d]", count );
14     for (i=1; i<=j; ++i)
15     {
16         printf( "%d", p[i] );
17     }
18
19 }
20
21 void Move( int x, int d )
22 {
23     int z;
24     z=p[pi[x]+d];
25     p[pi[x]] = z;
26     p[pi[x]+d] = x;
27     pi[z] = pi[x];
28     pi[x] = pi[x]+d;
29 }
30
31
32
33 void Perm ( int n )
34 {
35     int i;
36     if (n>j)
37         PrintPerm();
38     else

```

```

28     pi[x] = pi[x]+d;
29 }
30
31
32
33 void Perm ( int n )
34 {
35     int i;
36     if (n>j)
37         PrintPerm();
38     else
39     {
40         Perm(n+1);
41         for (i=1; i<=n-1; ++i)
42         {
43             Move(n,dir[n]);
44             Perm(n+1);
45         }
46         dir[n] = -dir[n];
47     }
48 }
49
50 int main ()
51 {
52     printf( "Enter the value of n:" );
53     scanf( "%d",&j );
54     for (i=1; i<=j; ++i)
55     {
56         dir[i] = -1; p[i] = i;
57         pi[i] = i;
58     }
59     Perm (1);
60     printf( "\n" );
61
62     return 0;
63 }
64
65

```

C:\WINDOWS\SYSTEM32\cmd.exe

Enter the value of n:4

```
[1]1234
[2]1243
[3]1423
[4]4123
[5]4132
[6]1432
[7]1342
[8]1324
[9]3124
[10]3142
[11]3412
[12]4312
[13]4321
[14]3421
[15]3241
[16]3214
[17]2314
[18]2341
[19]2431
[20]4231
[21]4213
[22]2413
[23]2143
[24]2134
```

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(program exited with code: 0)

Press any key to continue . . .