//Quiz 3
//This program uses the concept of passing arrays to functions
//and generates a pattern of numbers (stored in the array b).
//Analyze the program and Complete the Out Put.

#include<iostream.h>

void printpattern(int [], int );

int main()
{
  int b[] = {0, 9 , 8 ,5 ,3 ,7 ,2 ,6 , 1 , 3};
  printpattern(b,10);
  return 0;
}

void printpattern(int a[], int size)
{
  int m = 0;
  for(int i = 1; i<=4;++i)
  {
    for(int j = 1; j<=i ;++j)
      cout<< a[m++]<<' ';  
    cout<<endl;
  }
  m = size - 1;
  for(int i = 4; i>0;--i)
  {
    for(int j = 1; j<=i ;++j)
      cout<< a[m--]<<' ';  
    cout<<endl;
  }
}
Solution:

Array b is passed to the function by reference, this array is addressed as a inside the function.

The index variable i keeps track of the line numbers, index variable j keeps track of the number of elements to be printed on each line and the variable m keeps track of the array indices.

The looping process arranges the elements as shown below

```
a[0]
a[0] a[1]
a[0] a[1] a[2]
a[2] a[1] a[0]
a[1] a[0]
a[0]
```

```
0
9 8
5 3 7
2 6 1 3
3 1 6 2
7 3 5
8 9
0
```