rotateAr

Write a C program that reads in the size of an array and the corresponding numbers (each number is between 0 and 9) for the array, and prints a pattern to the screen. In the pattern, it prints the number of lines according to the size of the array. For each line, the program moves the last element of the array to be the first element of the array, shifts the rest of the elements by one index position, and prints all the elements of the array to the screen. The printing will stop when all the lines of data have been printed. For example, if the array size is 6 and the array data is {7,4,8,9,1,5}, then the following 6 lines of data pattern will be printed to the screen:

```
574891
157489
915748
891574
489157
748915
```

A sample program template is given below:

```
#include <stdio.h>
#define N 20
int main()
{
   int a[N],i,j,k,m;
   int size;
   /* Write your code here – for additional local variables */

   printf("Enter array size: \n");
   scanf("%d",&size);
   printf("Enter %d data: \n", size);
   for (i=0; i<size; i++)
      scanf("%d", &a[i]);
   printf("Result: \n");

   /* Write your code here */
   return 0;
}
```

Some sample input and output sessions are given below:

(1) Test Case 1:

```
Enter array size:
5
Enter 5 data:
1 2 3 4 5
Result:
51234
45123
34512
23451
12345
```

(2) Test Case 2:

```
Enter array size:
```

```
6
Enter 6 data:
7 4 8 9 1 5
Result:
574891
157489
915748
891574
489157
748915
```

(3) Test Case 3:

```
Enter array size:
5
Enter 5 data:
1 2 3 4 9
Result:
91234
49123
34912
23491
12349
```

(4) Test Case 4:

```
Enter array size:
2
Enter 2 data:
9 1
Result:
19
91
```

```
#include <stdio.h>
#define N 20
int main()
{
  int a[N],i,j,k,m;
  int size;

  printf("Enter array size: \n");
  scanf("%d",&size);
  printf("Enter %d data: \n", size);
  for (i=0; i<size; i++)
    scanf("%d", &a[i]);
  printf("Result: \n");

   int h = size;
   int temp;

   while(h!=0)
   {
      temp = a[size-1];
      for(i=size-1;i>=1;i--)
      {
         a[i] = a[i-1];
      }
      a[0] = temp;
      for(i=0;i<size;i++)
      {
         printf("%d",a[i]);
      }
      printf("\n");
      h--;
   }
  return 0;
}
```