EE 2905

Dr. Johnson

Program 9

No capabilities beyond those discussed in class or in the notes are allowed

Write a program to read in a 2-dimensional nxn array of integers, print the array, rotate it left or right and print out the new array

Note – you will have to set the value for N as a #define – mbed does not support run time array sizing

use the following function prototypes:

#define N 5

// function prototypes
void get_ary(int size, int ary[][N]);
void print_ary(int size, const int ary[][N]);
void rotate_ary(int size, const int in_ary[][N], int out_ary[][N]); // out_ary is the rotated version of in_ary
// this function asks the user which direction to rotate

Don't just go search the web – see if you can figure this out yourself
Reminder – no capabilities beyond what we have discussed

```
program_9
Using Mbed OS version 6.10.0

Welcome to array rotation program

please enter the values for row 0: 1 2 3 4 5
please enter the values for row 1: 6 7 8 9 10
please enter the values for row 2: 11 12 13 14 15
please enter the values for row 3: 16 17 18 19 20
please enter the values for row 4: 21 22 23 24 25
The array you entered is:
    1        2        3        4        5
    6        7        8        9       10
   11       12       13       14       15
   16       17       18       19       20
   21       22       23       24       25

Would you like to rotate the array right (R) or left(L)? R
   21       16       11        6        1
   22       17       12        7        2
   23       18       13        8        3
   24       19       14        9        4
   25       20       15       10        5

please enter the values for row 0: 1 2 3 4 5
please enter the values for row 1: 6 7 8 9 10
please enter the values for row 2: 11 12 13 14 15
please enter the values for row 3: 16 17 18 19 20
please enter the values for row 4: 21 22 23 24 25
The array you entered is:
    1        2        3        4        5
    6        7        8        9       10
   11       12       13       14       15
   16       17       18       19       20
   21       22       23       24       25

Would you like to rotate the array right (R) or left(L)? L
    5       10       15       20       25
    4        9       14       19       24
    3        8       13       18       23
    2        7       12       17       22
    1        6       11       16       21

please enter the values for row 0:
```