

Northern Michigan University (Marquette Co, MI)

CS201-01-22F: Programming In C++ (Andrew A. Poe)
Quiz 2

Name: _____
Friday 16 September 2022 11:00 A.M. EDT

Time: 15 minutes.

Write the following method (not a whole program):

```
int ** Cycle (int rlen, int clen) { ... }
```

This method creates and returns an array of integers with the specified row and column lengths.

It initializes the array so that it contains the cyclic pattern demonstrated by example:

If the array size is 3x4, the array should be:

0	1	2	3
1	2	3	0
2	3	0	1

The first row contains integers counting from 0. All the other rows consist of shifting the previous row one position to the left.

This can be done with a very short series of loops and arithmetic. It doesn't have to be complicated.

```
int **Cycle (int rlen, int clen) {  
  
    int **A = new int*[clen];  
    for (int i = 0; i < clen; i++) {  
        A[i] = new int[rlen];  
        for (int j=0; j < rlen; j++)  
            A[i][j] = (i+j)%rlen;  
    }  
    return A;  
}
```