# COMP 2355
# Winter 2013
# Lab #5
# January 22, 2013

**This lab should be submitted to your course SVN by noon on January 23 in a folder named "Lab5".**

In this lab you will be using a uint64_t as an 8x8 boolean array. You will write functions to get, set, fill and clear the bit array.

1. Write functions to fill and clear a 8x8 bit array.

```
// returns a 8x8 array with all bits set
uint64_t FillArray();


// returns a 8x8 array with all bits clear
uint64_t ClearArray();
```

2. Write the functions: SetBit, ClearBit, TestBit

```
// tests if the value in location x/y is set
// if x or y are out of bounds, returns false
bool TestBit(uint64_t bitArray, int x, int y)
{
}

// sets bit in the location x/y to 1
// if x or y are out of bounds function has no effect
void SetBit(uint64_t * bitArray, int x, int y)
{
}

// sets bit in the location x/y to 0
// if x or y are out of bounds function has no effect
void ClearBit(uint64_t * bitArray, int x, int y)
{
}
```

3. Perform 10,000,000 array operations (test/set/clear) on a regular array and bit array and see which is faster. (Just use a stopwatch to get a rough estimate.)