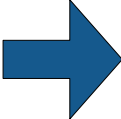
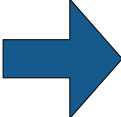


# Sign Extension

(5)      0101            00000101

(-4)      1100            11111100

# Project 1 Preview

- **sign(x)**: Given an int **x**, return 1 if x is positive, 0 if x is zero, and -1 if x is negative.
- No loops or conditionals!
- Allowed operators: ! ~ & ^ | + << >>
- **Hint**: First consider how to get -1 if x is negative and 0 otherwise. Then extend for 1 if positive.

# Unsigned Bugs...

```
float sum_elements(float a[], unsigned length) {  
  
    int i;  
    float result = 0;  
  
    for (i = 0; i <= length - 1; i++) {  
        result += a[i];  
    }  
  
    return result;  
}
```