

# Class Activity

In groups of 2 or 3 discuss whether or not the following programs are recursive or not, additionally identify the base case and recursive case if they are recursive functions.

Function 1:

```
int factorial(int n) {
    if (n <= 1)
        return 1;
    else
        return n * factorial(n - 1);
}
```

Function 2:

```
bool isEven(int n) {
    if (n == 0)
        return true;
    else
        return !isEven(n - 1);
}
```

Function 3:

```
int sumArray(int arr[], int n) {
    int sum = 0;
    for (int i = 0; i < n; i++) {
        sum += arr[i];
    }
    return sum;
}
```

Function 4:

```
int power(int base, int exp) {
    int result = 1;
    for (int i = 0; i < exp; i++) {
        result *= base;
    }
    return result;
}
```