

Data Structure: Assignment #6

1. Use a recursive method to reverse a Queue without using any other data-structure.
2. Use a recursive method to convert a number from decimal to binary.
3. Use a recursive method to reverse a string.
4. Find Big O notation for the following code:

a.

```
for( int i = 0; i < n ; i++)  
    for( int j=0 ;j < n ; j++)
```

```
        _____  
    }  
}
```

b.

```
for( int i = 0; i < n ; i++)  
    for( int j=i ;j < n ; j++)
```

```
        _____  
    }  
}
```

c.

```
for( int i = 0; i < n ; i++)  
    for( int j=0 ;j < m ; j++)
```

```
        _____  
    }  
}
```

d.

```
for (int i = 1; i < n; i = i * 2){  
    System.out.println("Hey - I'm busy looking at: " + i);  
}
```

e.

```
for (int i = 1; i <= Math.pow(2, n); i++){  
    System.out.println("Hey - I'm busy looking at: " + i);  
}
```

f.

```
for( i=0 ; i<n ; i++)  
{  
    if ( i==1 )  
        Break;  
}
```