정보구조 Assignment 1

독어교육과 정은주

2014-19498

problem 1

```
In [5]: #problem 1
        def extract_first_and_last(L):
            first = 0
            last = len(L)-1
            return [L[first], L[last]]
```

```
def extract_first_and_last(L):

first = 0
last = -1
return [L[first], L[last]]
```

```
In [6]: M = [1, 2, 3, 4, 5]
```

```
In [7]: print(extract_first_and_last(M))

[1, 5]
```

problem 2

```
In [8]: # Problem 2
```

```
In [9]: def is_odd(n):
            if(n<=0):
                return False
            elif(n%2 == 1):
                return True
            else:
                return False
```

```
In [10]: print(is_odd(3))

True
```

```
In [11]: print(is_odd(2))

False
```

problem 3

```
In [12]:   # Problem 3

In [30]:   def sum_of_squares(n):
               sum = 0
               for i in range(n):
                   sum += i**2
               return sum

In [31]:   print(sum_of_squares(4))

           14
```

```
def sum_of_squares_alter(n):
return sum([i**2 for i in range(1,n)])
```

problem 4

```
In [32]:   #Problem 4

In [37]:   def make_triple_key_val(n):
               triple = {}
               for i in range(1, n+1):
                   triple[i] = i**3
               return triple
```

```
def dict_cubed_alter(n):
return { i:i**3 for i in range(1, n+1)}
```

```
In [38]:   print(make_triple_key_val(3))

           {1: 1, 2: 8, 3: 27}

In [39]:   print(make_triple_key_val(5))

           {1: 1, 2: 8, 3: 27, 4: 64, 5: 125}
```