ICS python & ML 과제

1. Fibonacci 50을 연산을 할 때 1초 이내로 나오도록 설계해 보세요.

```
def Fibonacci(n):
        if n <= 2:
                return 1
        else:
                return Fibonacci(n-1) + Fibonacci(n-2)
```

위의 코드는 예제 입니다. 개조해 보세요.

2. Machine Learning중 Gradient Descent Algorithm을 설계해 보세요.

```
import tensorflow as tf

x_data = [1, 2, 3, 4, 5, 6]
y_data = [1, 2, 3, 4, 5, 6]

W = tf.Variable(tf.random_normal([1]), name='weight')

X = tf.placeholder(tf.float32)
Y = tf.placeholder(tf.float32)

hypothesis = X * W

cost = ________________________________________
```

```
# alpha = learning_rate, descent = new weight


alpha = 0.1
gradient = tf.reduce_mean(_____________________)
descent = W - _____________________
update = W.assign(descent)


sess = tf.Session()
sess.run(tf.global_variables_initializer())


for step in range(21):
    sess.run(update, feed_dict={_____________________})
    print(step, sess.run(cost, feed_dict = {_____________}), sess.run(W))
```