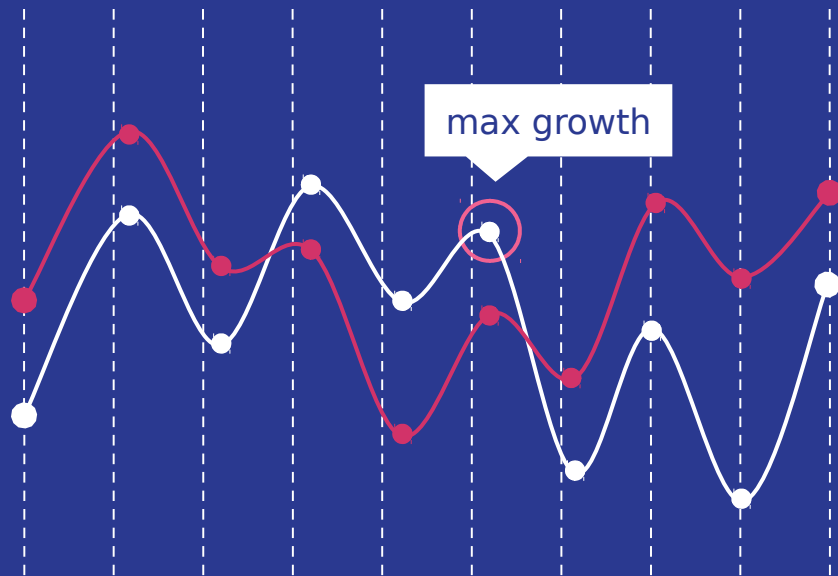




# Introduction to Computer Programming

CMP 201 (2019/2020)

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# LESSON 4:

Be a Ninja Coder!

# Objectives

The aim of this lesson is to build on the foundational knowledge given to the students in the first lecture.

# Content(Week

1)

- **Loops** ✓

# Python Loops:

Nothing is worse than having to do the same thing over and over again.

To print hello five times in Python, you could do the following

```
print ( "hello" );  
print ( "hello" );  
print ( "hello" );  
print ( "hello" );  
print ( "hello" );
```

# Python Loops:

Now, lets try to write the following

```
for x in range( 0, 5 ) :  
    print ( "hello" )
```

# PUZZLE:

```
words= [ 'cat', 'mouse' ]
```

```
for word in words:
```

```
    print ( len( word ) )
```

# Python Loops:

Python has two primitive loop commands:

- while loops
- for loops



# While Loop:

With the while loop we can execute a set of statements as long as a condition is true:

```
#Print i as long as i is less than 6:
```

```
i = 1
```

```
while i < 6:
```

```
    print(i)
```

```
    i += 1
```

# While Loop:

**Note:** remember to increment i, or else the loop will continue forever:

# Break statement:

With the break statement we can stop the loop even if the while condition is true:

```
#Exit the loop when i is 3
```

```
i = 1
```

```
while i < 6:
```

```
    print(i)
```

```
    if i == 3:
```

```
        break
```

```
    i += 1
```

# Continue statement:

With the continue statement we can stop the current iteration, and continue with the next:

#Continue to the next iteration if i is 3:

i = 1

```
while i < 6:
```

```
    print(i)
```

```
    if ( i == 3 ):
```

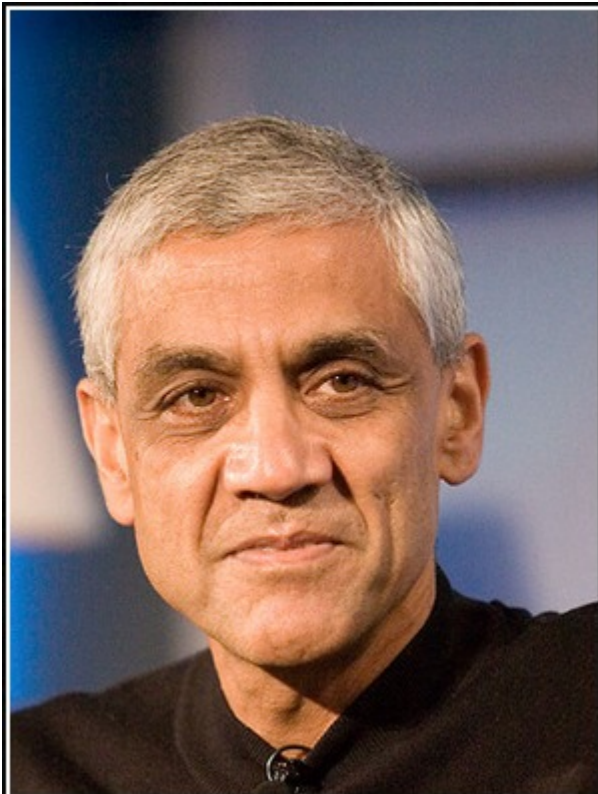
```
        continue
```

```
    i += 1
```

# EXERCISE

(Uniqueness in code earns extra credit).

- 1. Each question should be kept in a single .py file**
- 2. then all zipped in a file**
- 3. with your matric No. as name of the file**



Doctors can be replaced by software  
– 80% of them can. I'd much rather  
have a good machine learning  
system diagnose my disease than  
the median or average doctor.

— *Vinod Khosla* —

**AZ** QUOTES