Module 01

Lambda Exp Tuples & Etc

Data Science Developer

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Dictionaries

Similar like lists, different in the index.

```
d = { "key1" : "item1", "key2" : "item2",
"kucing" : [3, "jerapah"] };

print(d["key1"]);
print(d["key2"]);
print(d["kucing"]);
print(d["kucing"][1]);
```

Dictionaries inside Dictionaries

```
d = { "key1" : { "key2" : "item2" },
"kucing" : [3, "jerapah"] };

print(d["key1"]);
print(d["key1"]["key2"]);
print(d["kucing"]);
print(d["kucing"][1]);
```

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Tuples

Similar like lists, but Tuples value cant be changed.

```
t = (1, [0, "test"], { "a1" : True });

print(t[2]["a1"]);
print(t[1][1]);
t[1][1] = "akan";
print(t[1][1]);
t[1] = "mark";
print(t[1]);
```

Tuples inside Tuples

```
t = (1, [0, "test"], { "a1" : True },
(0,{ "test" : 5 },2));

print(t[3][1]["test"]);
```

Sets

Sets doesn’t support indexing, there isn’t duplicate items in set (every item unique).

```
s = { 1, 3, 1, 2, 2, 3 };

print(s);
print(list(s)[2]);
```

Filtering List using Set

```
newList = [ 1, 3, "test1", "test2" , 2, 3, "test1" ];
s = set(newList);

print(s);
print(list(s)[2]);
```

List Comprehension

```
listNum = [ 1, 2, 3, 4, 5];
listNum = [item * 2 for item in listNum];
print(listNum);
```

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List Comprehension

```
def times2(num) :
    return num * 2;

listNum = [ 1, 2, 3, 4, 5];
listNum = [times2(item) for item in listNum];
print(listNum);
```

Lambda Expressions

```
def times2(num) :
    return num * 2;

lambda num: num * 2;
```

Map

Without Lambda (using function) :

```
def times2(num) :
    return num * 2;

listNum = [ 1, 2, 3, 4, 5];
listNum = list(map(times2, listNum));
print(listNum);
```

With Lambda :

```
listNum = [ 1, 2, 3, 4, 5];
listNum = list(map(lambda num: num * 2, listNum));
print(listNum);
```

Filter

Without Lambda (using function) :

```
def genap(num) :
    return num % 2 == 0;

listNum = [ 1, 2, 3, 4, 5];
listNum = list(filter(genap, listNum));
print(listNum);
```

With Lambda :

```
listNum = [ 1, 2, 3, 4, 5];
listNum = list(filter(lambda num: num % 2 == 0, listNum));
print(listNum);
```

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Methods for Searching

```
numList = [1,2,3];
input = 'x';

check1 = input in numList;
check2 = 'x' in ['x','y','z'];
check3 = 'ka' in 'kurakas';

print(check1);
print(check2);
print(check3);
```

Solve It! #1

Buatlah aplikasi python sederhana untuk filtering list (searching) berdasarkan input user seperti dibawah ini.

```
PS D:\Purwadhika\Purwadhika\Python Fundamental> python sc
['Merdeka', 'Hello', 'Hellos', 'Sohib', 'Kari ayam']
Search : ka
['Merdeka', 'Kari ayam']
PS D:\Purwadhika\Purwadhika\Python Fundamental> python sc
['Merdeka', 'Hello', 'Hellos', 'Sohib', 'Kari ayam']
Search : hel
['Hello', 'Hellos']
```

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