

DAILY ONLINE ACTIVITIES SUMMARY

Date:	14/07/2020	Name:	Prathiksha
Sem & Sec	8 th sem & B sec	USN:	4AL16CS070
Online Test Summary			
Subject	-		
Max. Marks	-	Score	-
Certification Course Summary			
Course	Introduction to Data Science in Python.		
Certificate Provider	Coursera	Duration	4 weeks
Coding Challenges			
Problem Statement:			
1. Java Program To Print Hollow Mirrored Rhombus			
Status: Solved			
Uploaded the report in Github		Yes	
If yes Repository name		Prathiksha	
Uploaded the report in slack		Yes	

Online Test Details:

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Certification Course Details:

Introduction to Data Science in Python > Week 1 > Advanced Python Lambda and List Co

PrevNext

Python Fundamentals

✓

Video: Introduction to Specialization

3 min

✓

Reading: Syllabus

10 min

✓

Reading: Help us learn more about you!

10 min

✓

Video: Data Science

7 min

✓

Reading: 50 years of Data Science, David Donoho (optional)

1h 30m

✓

Video: The Coursera Jupyter Notebook System

3 min

✓

Reading: Notice for Auditing Learners: Assignment Submission

10 min

✓

Notebook: Week 1 Lectures Jupyter Notebook

✓

Video: Python Functions

8 min

✓

Video: Python Types and Sequences

8 min

✓

Video: Python More on Strings

3 min

✓

Video: Python Demonstration: Reading and Writing CSV files

3 min

✓

Video: Python Dates and Times

2 min

✓

Video: Advanced Python Objects, map()

5 min

▶

Video: Advanced Python Lambda and List Comprehensions

2 min

▶

Video: Advanced Python Demonstration: The Numerical Python Library (NumPy)

7 min

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Quiz: Week One Quiz

12 questions

Advanced Python Lambda and List Comprehensions

Advanced Python Lambda and List Comprehensions

INTRODUCTION TO DATA SCIENCE

Christopher Brooks

Research Assistant Professor
School of Information

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English

Help Us Translate

0:08

You may have seen the keyword `lambda` appear in this week's content, and you'll certainly see it appear more as you spend more and more time with Python and data science. Lambdas are Python's way of creating anonymous functions. These are the same as other functions, but they have no name. The intent is that they're simple or short lived and it's easier just to write out the function in one line instead of going to the trouble of creating a named function.

0:33

The `lambda` syntax is fairly simple. But it might take a bit of time to get used to.

0:38

You declare a `lambda` function with the word `lambda` followed by a list of arguments, followed by a colon and then a single expression and this is key. There's only one expression to be evaluated in a `lambda`. The expression value is returned on execution of the `lambda`.

0:55

The return of a `lambda` is a function reference. So in this case, you would execute `my_function` and pass in three different parameters.

1:04

Note that you can't have default values for `lambda` parameters and you can't have complex logic inside of the `lambda` itself because you're limited to a single expression.

1:14

So `lambdas` are really much more limited than full function definitions. But I think they're very useful for simple little data cleaning tasks. And you'll see lots of examples with them on the web. So you should be able to read and write `lambdas`. Let's give it a try here.

1:30

We've learned a lot about sequences and in Python. Tuples, lists, dictionaries and so forth.

1:37

Sequences are structures that we can iterate over, and often we create these through loops or by reading in data from a file.

1:45

Python has built in support for creating these collections using a more abbreviated syntax called list comprehensions.

1:54

Here's an example. First we write up a little `for-loop`. Here I'm iterating between zero and 1,000 and then checking with the modulus operator to see if the number divided by two results in any decimals. If the modulus two of the number is zero, then I know it divides evenly so this must be an even number and I'll add it to our list.

2:15

We can rewrite this as a list comprehension by pulling the iteration on one line. We start the list comprehension with the value we want in the list. In this case, it's a number. Then we put it in the `for-loop`, and then finally, we add any condition clauses. You can see that this is much more compact of a format. And it tends to be faster as well.

2:36

Just like with `lambdas`, list comprehensions are a condensed format which may offer readability and performance benefits and you'll often find them being used in data

Topic: Understanding data science.

Coding Challenges Details:

Program 1:

```
public class HMRhombusstar
{
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter N : ");
        int n=sc.nextInt();
        System.out.print("Enter Symbol : ");
        char c = sc.next().charAt(0);
        int i=1,j=1;
        do
        {
            j=i;
            do
            {
                System.out.print(" ");
            }
            while(--j>0);
            if(i==1 || i==n)
            {
                j=1;
                do
                {
                    System.out.print(c);
                }
                while(++j<=n);
            }
            else
            {
                j=1;
                do
                {
                    if(j==1 || j==n)
                        System.out.print(c);
                    else
                        System.out.print(" ");
                } while(++j<=n);
            }
            System.out.println();
        }
```

```
++i;
```

```
} while(i<=n);
```

```
}
```

```
}
```