

<https://swayam.gov.in>https://swayam.gov.in/nc_details/NPTEL

9440753245vec@gmail.com ▾

NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » **Programming, Data Structures And Algorithms Using Python (course)**



Course outline

How does an NPTEL online course work?

Week 1 :
Introduction

Week 1 Quiz

Week 2: Basics of Python

Week 2 Quiz

Week 2
Programming Assignment

Week 3: Lists, inductive function definitions, sorting

Week 3
Programming

Week 4 Quiz

The due date for submitting this assignment has passed.

Due on 2021-09-01, 23:59 IST.

Score: 7.5/10=75%

Assignment submitted on 2021-08-20, 11:57 IST

All questions carry equal weightage. All Python code is assumed to be executed using Python3. You may submit as many times as you like within the deadline. Your final submission will be graded.

Note:

- If the question asks about a value of type string, remember to enclose your answer in single or double quotes.
- If the question asks about a value of type list, remember to enclose your answer in square brackets and use commas to separate list items.

1) Consider the following Python function.

```
def mystery(l):  
    if l == []:  
        return(1)  
    else:  
        return(mystery(l[1:])+l[:1])
```

What does `mystery([22, 34, 18, 57, 92, 45])` return?


[34,18,57,92,45,22]

No, the answer is incorrect.
Score: 0

Assignment

Week 4: Sorting, Tuples, Dictionaries, Passing Functions, List Comprehension

Week 4 Quiz

 **Quiz: Week 4 Quiz**
(assessment? name=115)

Week 4 Programming Assignment

Week 5: Exception handling, input/output, file handling, string processing

Week 5 Programming Assignment

Week 6: Backtracking, scope, data structures; stacks, queues and heaps

Week 6 Quiz

Download Videos

Feedback:

Elements are moved from the beginning of the list to the end, so the list gets reversed.

Accepted Answers:

(Type: Regex Match) `[]*[[]*45[]*,[]*92[]*,[]*57[]*,[]*18[]*,[]*34[]*,[]*22[]*][]*`

2.5 points

2) What is the value of pairs after the following assignment?

```
pairs = [ (x,y) for x in range(5,1,-1) for y in range(4,1,-1) if (x+y)%3 == 0 ]
```

`[(5,4),(4,2),(3,3),(2,4)]`

Yes, the answer is correct.

Score: 2.5

Accepted Answers:

(Type: Regex Match) `[]*\([]*[5][]*,[]*[4][]*\)[]*,[]*\([]*[4][]*,[]*[2][]*\)[]*,[]*\([]*[3][]*,[]*[3][]*\)[]*\.[]*\([]*[2][]*,[]*[4][]*\)[]*\[]*`

2.5 points

3) Consider the following dictionary.

2.5 points

```
wickets = {"Tests":{"Ishant":[3,5,2,3],"Shami":[4,4,1,0],"Bumrah":[2,1,7,4]}, "ODI":{"Ishant":[2,0],"Shami":[1,2]}}
```

Which of the following statements does not generate an error?

- ☐ `wickets["ODI"]["Bumrah"][0:] = [4,4]`
- ☐ `wickets["ODI"]["Bumrah"].extend([4,4])`
- ☒ `wickets["ODI"]["Bumrah"] = [4,4]`
- ☐ `wickets["ODI"]["Bumrah"] = wickets["ODI"]["Bumrah"] + [4,4]`

Yes, the answer is correct.

Score: 2.5

Feedback:

Direct assignment to a new key adds a value. All other updates result in KeyError.

Accepted Answers:

`wickets["ODI"]["Bumrah"] = [4,4]`

4) Assume that hundreds has been initialized as an empty dictionary:

2.5 points

```
hundreds = {}
```

Which of the following generates an error?

- ☐ `hundreds["Tendulkar, international"] = 100`
- ☐ `hundreds["Tendulkar"] = {"international":100}`
- ☐ `hundreds[("Tendulkar","international")] = 100`
- ☒ `hundreds[["Tendulkar","international"]] = 100`

Yes, the answer is correct.

Score: 2.5

Feedback:

Dictionary keys must be immutable values.

Accepted Answers:

```
hundreds[["Tendulkar","international"]] = 100
```