Course outline

How to access the portal

Week 1: Introduction

Week 1 Quiz

Week 2: Basics of Python

Week 2 Quiz

Week 2 Programming Assignment

Week 3: Lists, inductive function

Online Test 1, Question 5

Due on 2019-09-26, 11:30 IST

Instructions

This is the first of two online programming tests.

- These tests account for 25% of the total evaluation for the course.
- The duration of the test is 2 hours.
- The first test will be from 9:30-11:30 am and the second from 8:00-10:00 pm, on Thursday, 26 September 2019.
- You can attempt either of the tests. The best score will be counted..

Question 5

A positive integer n is a sum of squares if $n = i^2 + j^2$ for integers i,j such that $i \geq 1$ and $j \geq 1$. For instance, 10 is a sum of squares because $10 = 1^2 + 3^2$, and so is 25 ($3^2 + 4^2$). On the other hand, 11 and 3 are not sums of squares.

Write a Python function `sumofsquares(n)` that takes a positive integer argument and returns `True` if the integer is a sum of squares, and `False` otherwise.

definitions, sorting

Week 3 Programming Assignment

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

Week 4 Quiz

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

Week 7: Classes, objects and user defined datatypes

Week 7 Quiz

Private Test cases used for evaluation	Input	Expected Output	Actual Output	Status
Test Case 1	sumofsquares (3219)	False \n	False \n	Passed
Test Case 2	sumofsquares (3218)	True\n	True \n	Passed
Test Case 3	sumofsquares (695005)	True\n	True \n	Passed
Test Case 4	sumofsquares (2)	True\n	True \n	Passed

Due Date Exceeded.
4 out of 4 tests passed.
You scored 100.0/100.

Your last recorded submission was :

```
1  def sumofsquares(n):
2      i = 1
3      while i*i <= n:
4          j = 1
5          while(j*j <= n):
6              if (i*i + j*j == n):
7                  return True
8              j+=1
9          i+=1
10     return False
11 import ast
12
13 def toint(inp):
14   inp = ast.literal_eval(inp)
15   return (inp)
16
17 fncall = input()
18 lparen = fncall.find("(")
19 rparen = fncall.rfind(")")
20 fname = fncall[:lparen]
21 farg = fncall[lparen+1:rparen]
22
23 if fname == "sumofsquares":
24   arg = toint(farg)
25   print(sumofsquares(arg))
26
27
```

Week 8: Dynamic programming, wrap-up

Week 8 Programming Assignment

Download videos

Text Transcripts

Online Programming Test - Sample

Online Programming Test 1, 26 Sep 2019, 09:30-11:30

- Online Test 1, Question 1 (/noc19_cs40/progassignment?name=113)
- Online Test 1, Question 2 (/noc19_cs40/progassignment?name=114)
- Online Test 1, Question 3 (/noc19_cs40/progassignment?name=115)
- Online Test 1, Question 4 (/noc19_cs40/progassignment?name=116)
- **Online Test 1, Question 5 (/noc19_cs40/progassignment?name=117)**
- Online Test 1, Question 6 (/noc19_cs40/progassignment?name=118)

- Online Test 1, Question 7 (/noc19_cs40/progassignment?name=119)
- Online Test 1, Question 8 (/noc19_cs40/progassignment?name=120)