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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

Online Test 2 Question 5

Due on 2020-12-01, 22:00 IST

Question 5

A positive integer n is a sum of three squares if $n = i^2 + j^2 + k^2$ for integers i, j, k such that $i \geq 1, j \geq 1$ and $k \geq 1$. For instance, 29 is a sum of three squares because $10 = 2^2 + 3^2 + 4^2$, and so is 6 ($1^2 + 1^2 + 2^2$). On the other hand, 16 and 20 are not sums of three squares.

Write a Python function `sumof3squares(n)` that takes a positive integer argument and returns True if the integer is a sum of three squares, and False otherwise.

Sample Test Cases

	Input	Output
Test Case 1	<code>sumof3squares(17)</code>	True
Test Case 2	<code>sumof3squares(19)</code>	True
Test Case 3	<code>sumof3squares(103)</code>	False
Test Case 4	<code>sumof3squares(119)</code>	False
Test Case 5	<code>sumof3squares(29)</code>	True
Test Case 6	<code>sumof3squares(16)</code>	False

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

**function
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
()**

**Week 8:
Dynamic
programming,
wrap-up ()**

**Week 8
Programming
Assignment
()**

**Text
Transcripts ()**

Books ()

**Download
Videos ()**

**Online
Programming
Test -
Sample ()**

**Online
Programming
Test 1, 01
Dec 2020,
10:00-12:00
()**

**Online
Programming
Test 2, 01
Dec 2020,
20:00-22:00
()**

☐ Instructions
(unit?
unit=128&lesson=129)

☐ Online Test 2
Question 1

(/noc20_cs26/progassignment?
name=130)

☐ Online Test 2
Question 2
(/noc20_cs26/progassignment?
name=133)

☐ Online Test 2
Question 3
(/noc20_cs26/progassignment?
name=135)

☐ Online Test 2
Question 4
(/noc20_cs26/progassignment?
name=141)

☐ **Online Test 2**
Question 5
(/noc20_cs26/progassignment?
name=142)

☐ Online Test 2
Question 6
(/noc20_cs26/progassignment?
name=143)

☐ Online Test 2
Question 7
(/noc20_cs26/progassignment?
name=145)

☐ Online Test 2
Question 8
(/noc20_cs26/progassignment?
name=146)

**Online
Programming
Test 1, 09
Mar 2021,
10:00-12:00
()**

**Online
Programming
Test 2, 09
Mar 2021,
20:00-22:00
()**

