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

Announcements (announcements)

About the Course (https://swayam.gov.in/nd1_noc19_cs40/preview)   Ask a Question (forum)

Progress (student/home)   Mentor (student/mentor)

Online Test 2, Question 5

Due on 2019-09-26, 22:00 IST

Instructions

This is the second 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 was from 9:30-11:30 am and the second is 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 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.

Private Test cases used for evaluation	Input	Expected Output	Actual Output	Status
Test Case 1	sumof3squares(17)	True\n	True \n	Passed
Test Case 2	sumof3squares(19)	True\n	True \n	Passed
Test Case 3	sumof3squares(103)	False \n	False \n	Passed
Test Case 4	sumof3squares(119)	False \n	False \n	Passed

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

Your last recorded submission was :

```
1  def sumof3squares(n):
2      i = 1
3      while i*i <= n:
4          j = 1
5          while(j*j <= n):
6              k=1
7              while(k*k <= n):
8                  if (i*i + j*j +k*k == n):
9                      return True
10                 k+=1
11             j+=1
12         i+=1
13     return False
14
15  sumof3squares(16)
16  import ast
17
18  def toint(inp):
19      inp = ast.literal_eval(inp)
20      return (inp)
21
22  fncall = input()
23  lparen = fncall.find("(")
24  rparen = fncall.rfind(")")
25  fname = fncall[:lparen]
26  farg = fncall[lparen+1:rparen]
27
28  if fname == "sumof3squares":
29      arg = toint(farg)
30      print(sumof3squares(arg))
31
32
```

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 Programming Test 2, 26 Sep 2019, 20:00-22:00

(/noc19_cs40/progassignment?name=125)

- Online Test 2, Question 6 (/noc19_cs40/progassignment?name=126)

- Online Test 2, Question 7 (/noc19_cs40/progassignment?name=127)

- Online Test 2, Question 8 (/noc19_cs40/progassignment?name=128)

- Online Programming Test 2, 26 Sep 2019, 20:00-22:00 (unit?unit=111&lesson=129)