Online Test 2, Question 5

Due on 2021-03-09, 22:00 IST

Question 5

A positive integer is said to be square free, if it is not divisible by any square integer strictly greater than 1. For instance, 5, 10 and 21 are square free, while 4 and 48 are not, since 4 is divisible by 2^2 and 48 is divisible by 4^2.

Write a Python function `squarefree(n)` that takes a positive integer argument and returns `True` if the integer is square free, and `False` otherwise.

Sample Test Cases

	Input	Output
Test Case 1	`squarefree(125)`	`False`
Test Case 2	`squarefree(57768232)`	`False`
Test Case 3	`squarefree(101)`	`True`
Test Case 4	`squarefree(1001)`	`True`
Test Case 5	`squarefree(5)`	`True`
Test Case 6	`squarefree(48)`	`False`

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.
Sample solutions (Provided by instructor)

```
1 import math
```

```
2  def squarefree(n):
3    for i in range(2,1+math.ceil(math.sqrt(n))):
4      if n%(i*i) == 0:
5        return(False)
6    return(True)
7  import ast
8
9  def toint(inp):
10   inp = ast.literal_eval(inp)
11   return (inp)
12
13 fncall = input()
14 lparen = fncall.find("(")
15 rparen = fncall.rfind(")")
16 fname = fncall[:lparen]
17 farg = fncall[lparen+1:rparen]
18
19 if fname == "squarefree":
20   arg = toint(farg)
21   print(squarefree(arg))
22
```

- **Week 7: Classes, objects and user defined datatypes ()**
- **Week 7 Quiz ()**
- **Week 8: Dynamic programming, wrap-up ()**
- **Week 8 Programming Assignment ()**
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- **Online Programming Test 2, 01 Dec 2020, 20:00-22:00 ()**
- **Online Programming Test 1, 09 Mar 2021, 10:00-12:00 ()**

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