PYQs

06 June 2024   09:49

1. Sep 22, Quiz 1

Question Label : Multiple Choice Question

```
1  def fun(m,n):
2      if m == n:
3          return n
4      else:
5          if m > n:
6              return fun(m-n, n)
7          else:
8              return fun(m, n-m)
```

What does the function Fun compute?

Options :

~~m + n using repeated subtraction~~

~~m mod n using repeated subtraction~~

~~The greatest common divisor of m and n~~

~~The least common multiple of m and n~~

2. Sep 22, Quiz 1

Question Label : Multiple Choice Question

```
1  def prime_bad(n):
2      if n < 2:
3          return False
4      for i in range(2, int(n**0.5)):
5          if n % i == 0:
6              return False
7      return True
```

Here is a function prime_bad that takes a positive integer n as input and returns True if the number is prime and False otherwise. There is an error in this function. For which of the following input values of n , does function prime_bad return an incorrect output?

Options :

~~16~~

~~29~~

~~49~~

~~37~~

3. Jan 23, Quiz 1

Consider the following function:

```
1  def fun(n):
2      total = 0
3      for i in range(n//2,n):
4          j = 2
5          while(j <= n):
6              total = total + n/2
7              j = j * 2
8      return total
```

Which of the following option correctly mentions the return value (total) of function fun in terms of n? Consider that input $n = 2^k$ where k is a positive integer.

Options :

▬▬▬▬▬ n^2

▬▬▬▬▬ $(\log n)^2/4$

▬▬▬▬▬ $(n \log n)/2$

6406531561951. ✔ $(n^2 \log n)/4$

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