Assignment -3

Python Programming

Assignment Date	19 September 2022
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Maximum Marks	2 Marks

Question-1:

Write a python program to test a given number is prime or not.

Solution:
```
num=int(input ("Enter your value:"))
print(num)
# If given number is greater than 1
if num>1:
# Iterate from 2 to n / 2
   for i in range(2, int(num/2)+1):
   # If num is divisible by any number between
   # 2 and n / 2, it is not prime
       if (num % i) == 0:
          print(num, "is not a prime number")
          break

       else:
          print (num, "is a prime number")
          break
else:
   print(num, "is not a prime number")
```

 OUTPUT:

```
Enter your value:98
98
98 is not a prime number
```

```
In [18]: num=int(input ("Enter your value:"))
         print(num)
         # If given number is greater than 1
         if num>1:
         # Iterate from 2 to n / 2
             for i in range(2, int(num/2)+1):
             # If num is divisible by any number between
             # 2 and n / 2, it is not prime
                     if (num % i) == 0:
                         print(num, "is not a prime number")
                         break

                     else:
                         print (num, "is a prime number")
                         break
         else:
             print(num, "is not a prime number")

         Enter your value:98
         98
         98 is not a prime number
```

Question-2:

Write a program to generate odd numbers from m to n using while loop.

Solution:
Python program to print odd Numbers

m=int(input("Enter the m value:"))
n=int(input("Enter the n value:"))

for num in range(m,n+1):
   while(num%2!=0):
     print(num)
     break

OUTPUT:
```
Enter the m value:10
Enter the n value:22
11
13
15
17
19
21
```

```
In [20]:  m=int(input("Enter the m value:"))
          n=int(input("Enter the n value:"))

          for num in range(m,n+1):
              while(num%2!=0):
                  print(num) |
                  break

          Enter the m value:10
          Enter the n value:22
          11
          13
          15
          17
          19
          21
```

Question-3:

Write a python program to display prime number series up to given number.

Solution:

Python program to display all the prime numbers within an interval

```
lower = int(input("Please Enter minimum value:"))
upper = int(input("Please Enter maximum value:"))
print("Prime numbers between", lower, "and", upper, "are:")
for num in range(lower, upper + 1):
   if num > 1:
     for i in range(2, num):
       if (num % i) == 0:
          break
     else:
       print(num)
```

OUTPUT:
```
Please Enter minimum value:23
Please Enter maximum value:30
Prime numbers between 23 and 30 are:
23
29
```

```
In [22]: lower = int(input("Please Enter minimum value:"))
         upper = int(input("Please Enter maximum value:"))
         print("Prime numbers between", lower, "and", upper, "are:")
         for num in range(lower, upper + 1):
             if num > 1:
                 for i in range(2, num):
                     if (num % i) == 0:
                         break |
                 else:
                     print(num)

         Please Enter minimum value:23
         Please Enter maximum value:30
         Prime numbers between 23 and 30 are:
         23
         29
```

Question-4:

Write a python program to generate Fibonacci series.

Solution:
```
# Program to display the Fibonacci sequence up to n-th term
nterms = int(input("How many terms? "))
n1, n2 = 0, 1
count = 0
if nterms <= 0:
   print("Please enter a positive integer")
elif nterms == 1:
   print("Fibonacci sequence upto",nterms,":")
   print(n1)
else:
   print("Fibonacci sequence:")
   while count < nterms:
     print(n1)
     nth = n1 + n2
     n1 = n2
     n2 = nth
     count += 1
```

OUTPUT:
```
How many terms? 10
Fibonacci sequence:
0
1
1
2
3
5
8
```

13
21
34

```
In [27]: nterms = int(input("How many terms? "))
         n1, n2 = 0, 1
         count = 0
         if nterms <= 0:
             print("Please enter a positive integer")
         elif nterms == 1:
             print("Fibonacci sequence upto",nterms,":")
             print(n1)
         else:
             print("Fibonacci sequence:")
             while count < nterms:
                 print(n1)
                 nth = n1 + n2
                 n1 = n2
                 n2 = nth
                 count += 1

How many terms? 10
Fibonacci sequence:
0
1
1
2
3
5
8
13
21
34
```