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
```