

IBM ASSIGNMENT 1

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

Program

```
n=int(input("enter the number"))
```

```
if n > 1:
```

```
for i in range(2, n):
```

```
if (n % i) == 0:
```

```
print(n, "is not a prime number")
```

```
break
```

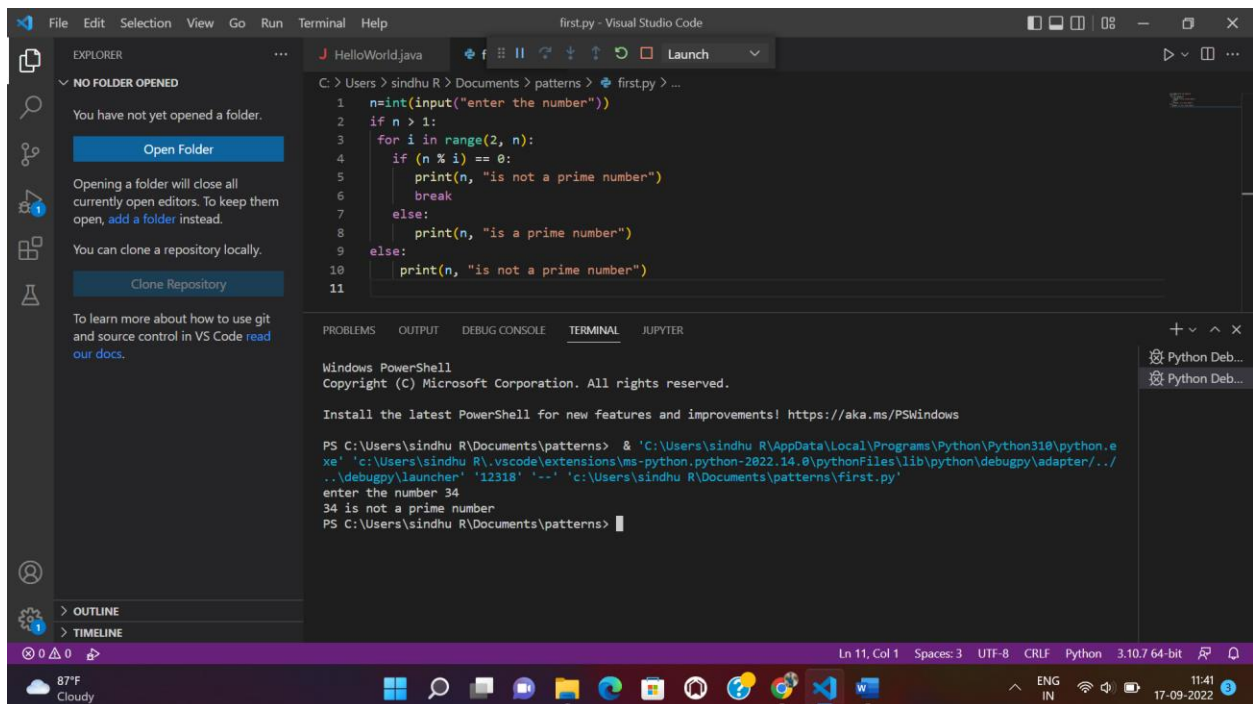
```
else:
```

```
print(n, "is a prime number")
```

```
else:
```

```
print(n, "is not a prime number")
```

OUTPUT:



```
File Edit Selection View Go Run Terminal Help
first.py - Visual Studio Code

EXPLORER
NO FOLDER OPENED
You have not yet opened a folder.
Open Folder
Opening a folder will close all currently open editors. To keep them open, add a folder instead.
You can clone a repository locally.
Clone Repository
To learn more about how to use git and source control in VS Code read our docs.

C:\Users\sindhu R\Documents\patterns> first.py
1 n=int(input("enter the number"))
2 if n > 1:
3     for i in range(2, n):
4         if (n % i) == 0:
5             print(n, "is not a prime number")
6             break
7         else:
8             print(n, "is a prime number")
9     else:
10        print(n, "is not a prime number")
11

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\sindhu R\Documents\patterns> & 'C:\Users\sindhu R\AppData\Local\Programs\Python\Python310\python.exe' 'c:\Users\sindhu R\.vscode\extensions\ms-python.python-2022.14.0\pythonFiles\lib\python\debugpy\adapter\..\debugpy\launcher' '12318' '--' 'c:\Users\sindhu R\Documents\patterns\first.py'
enter the number 34
34 is not a prime number
PS C:\Users\sindhu R\Documents\patterns>
```

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

Program:

```
first=int(input("enter the 1st number"))
```

```
last=int(input("enter the last number"))
```

```
for n in range(first,last + 1):
```

```
if n > 1:
```

```
for i in range(2,n):
```

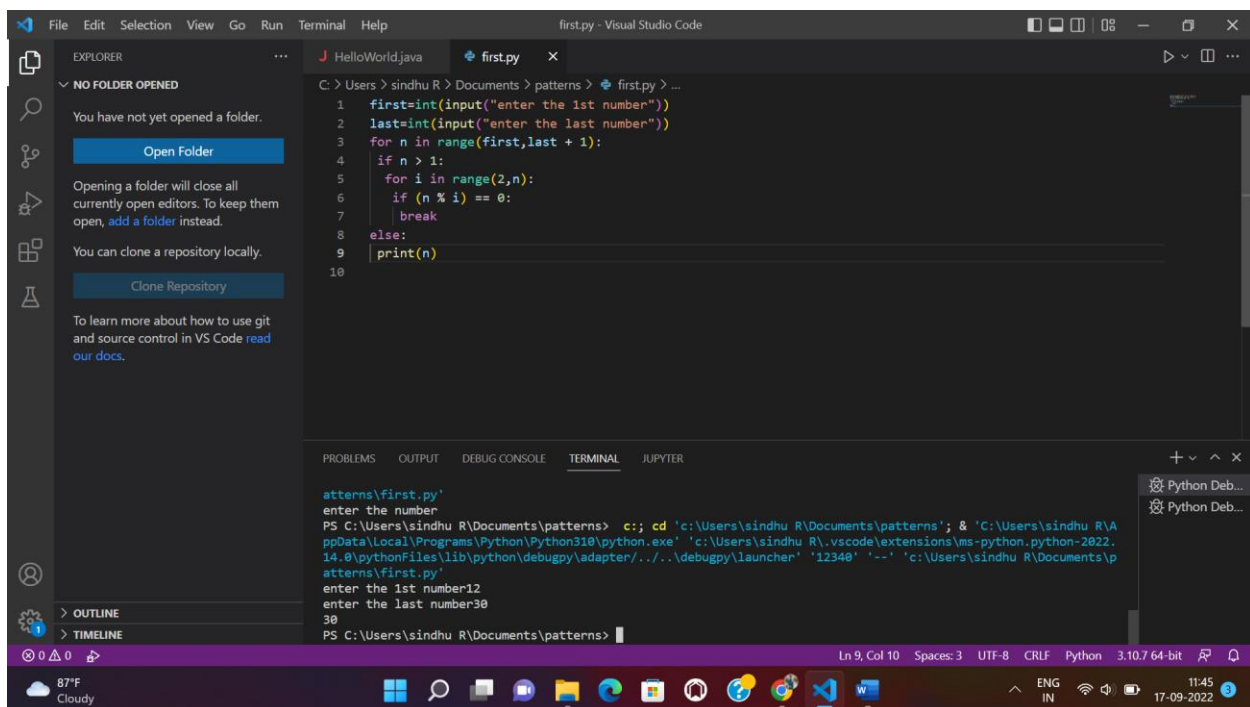
```
if (n % i) == 0:
```

```
break
```

```
else:
```

```
print(n)
```

OUTPUT:



The screenshot shows the Visual Studio Code interface. The Explorer panel on the left indicates 'NO FOLDER OPENED'. The main editor displays a file named 'first.py' with the following code:

```
1 first=int(input("enter the 1st number"))
2 last=int(input("enter the last number"))
3 for n in range(first,last + 1):
4     if n > 1:
5         for i in range(2,n):
6             if (n % i) == 0:
7                 break
8     else:
9         print(n)
10
```

The TERMINAL panel at the bottom shows the execution of the program:

```
attens\first.py
enter the number
PS C:\Users\sindhu R\Documents\patterns> c:: cd 'c:\Users\sindhu R\Documents\patterns'; & 'C:\Users\sindhu R\AppData\Local\Programs\Python\Python310\python.exe' 'c:\Users\sindhu R\.vscode\extensions\ms-python.python-2022.14.0\pythonfiles\lib\python\debugpy\adapter\..\..\debugpy\launcher' '12340' '--' 'c:\Users\sindhu R\Documents\patt
attens\first.py'
enter the 1st number12
enter the last number30
30
PS C:\Users\sindhu R\Documents\patterns>
```

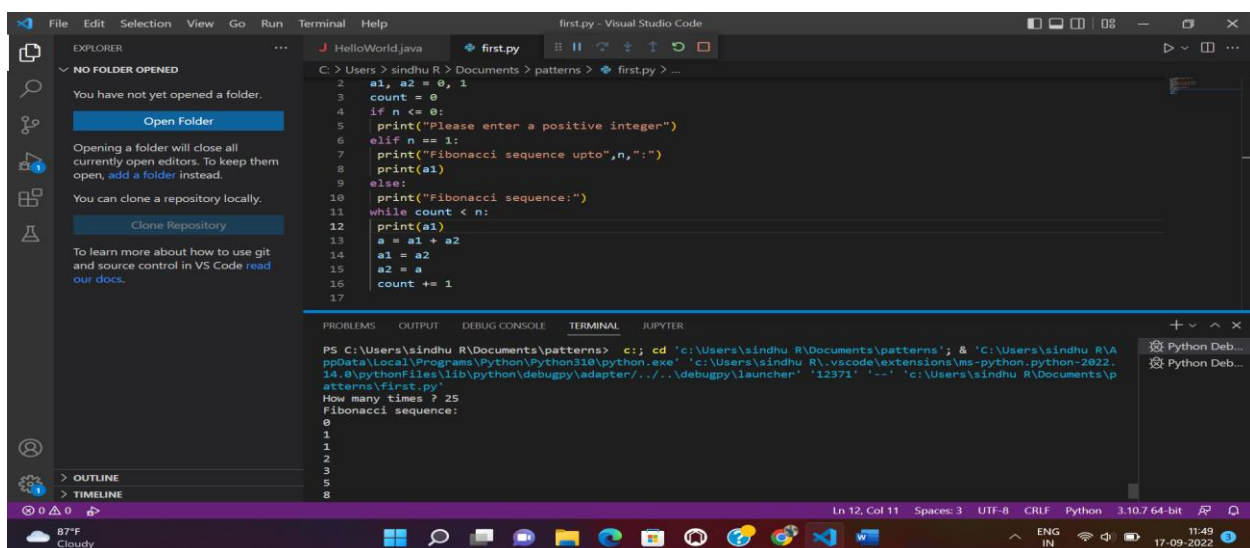
The status bar at the bottom indicates the file is 'first.py' at line 9, column 10, using UTF-8 encoding and CRLF line endings. The system tray shows a temperature of 87°F, cloudy weather, and the date 17-09-2022.

4. Write a python program to generate fibonacci series

Program:

```
n = int(input("How many times ? "))
a1, a2 = 0, 1
count = 0
if n <= 0:
    print("Please enter a positive integer")
elif n == 1:
    print("Fibonacci sequence upto",n,":")
    print(a1)
else:
    print("Fibonacci sequence:")
    while count < n:
        print(a1)
        a = a1 + a2
        a1 = a2
        a2 = a
        count += 1
```

OUTPUT:



The screenshot shows the Visual Studio Code interface with a Python file named 'first.py' open. The code in the editor is the same as provided in the previous block. The terminal at the bottom shows the command prompt where the file is executed. The output of the program is displayed in the terminal, showing the Fibonacci sequence for n=5.

```
PS C:\Users\sindhu R\Documents\patterns> c:\cd 'c:\Users\sindhu R\Documents\patterns'; & 'C:\Users\sindhu R\AppData\Local\Programs\Python\Python310\python.exe' 'c:\Users\sindhu R\.vscode\extensions\ms-python.python-2022.14.0\pythonFiles\lib\python\debugpy\adapter\..\..\debugpy\launcher' '12371' '-x' 'c:\Users\sindhu R\Documents\patterns\first.py'
How many times ? 5
Fibonacci sequence:
0
1
1
2
3
5
```

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

Program:

```
m=int(input("enter the 1st number"))
```

```
n=int(input("enter the last number"))
```

```
p=m
```

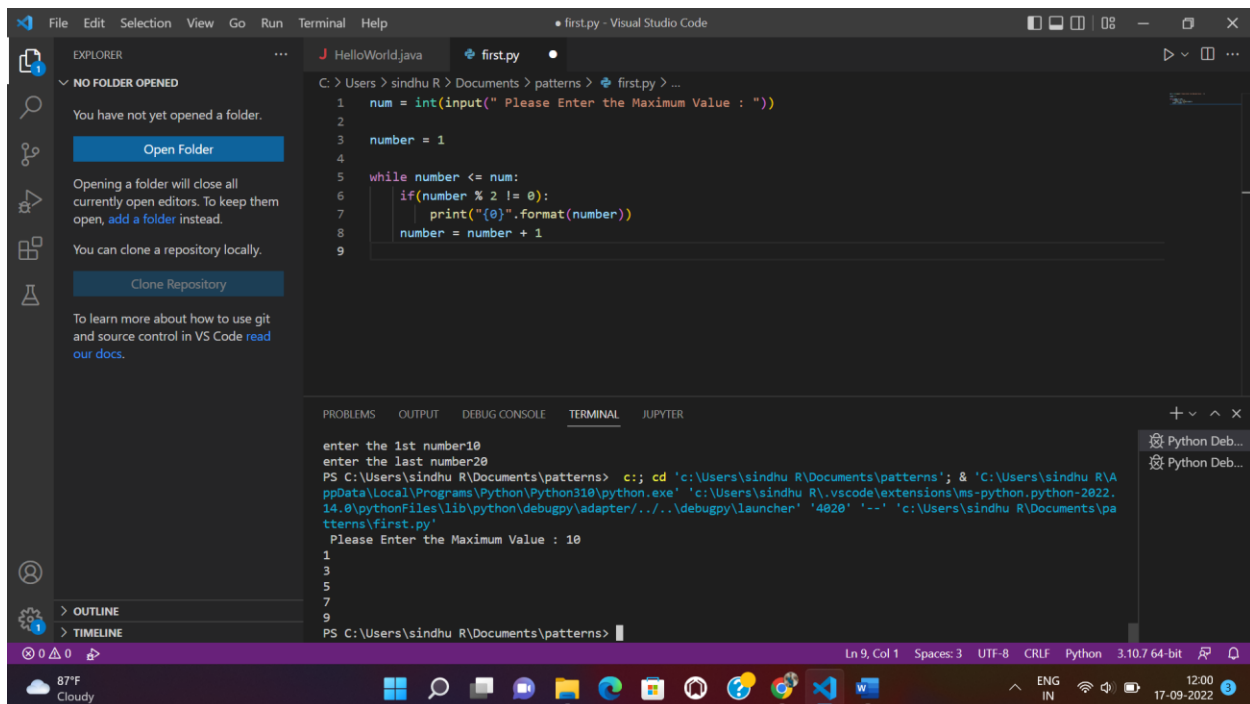
```
while (p<=n):
```

```
    if(n%2!=0):
```

```
        print(n)
```

```
    p+=1
```

OUTPUT:



```
File Edit Selection View Go Run Terminal Help • first.py - Visual Studio Code
```

EXPLORER

NO FOLDER OPENED

You have not yet opened a folder.

Open Folder

Opening a folder will close all currently open editors. To keep them open, add a folder instead.

You can clone a repository locally.

Clone Repository

To learn more about how to use git and source control in VS Code read our docs.

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER

```
C:\Users> cd C:\Users\sinhu R\Documents\patterns > first.py > ...
1 num = int(input(" Please Enter the Maximum Value : "))
2
3 number = 1
4
5 while number <= num:
6     if(number % 2 != 0):
7         print("{0}".format(number))
8     number = number + 1
9
```

```
enter the 1st number10
enter the last number20
PS C:\Users\sinhu R\Documents\patterns> c::; cd 'c:\Users\sinhu R\Documents\patterns'; & 'C:\Users\sinhu R\AppData\Local\Programs\Python\Python310\python.exe' 'c:\Users\sinhu R\.vscode\extensions\ms-python.python-2022.14.0\pythonFiles\lib\python\debugpy\adapter\..\..\debugpy\launcher' '4020' '--' 'c:\Users\sinhu R\Documents\patterns\first.py'
Please Enter the Maximum Value : 10
1
3
5
7
9
PS C:\Users\sinhu R\Documents\patterns>
```

87°F Cloudy

Ln 9, Col 1 Spaces: 3 UTF-8 CRLF Python 3.10.7 64-bit

ENG IN 12:00 17-09-2022