

Python Lab MST Worksheet – 1

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Section/Group: 809/A

Semester: 4th

Date of Performance: 16/03/2022

Subject Name: Programming in Python Lab

Subject Code: 20CSP-259

1. Aim/Overview of the practical:

- I. WAP to check whether the entered number is Armstrong or not.
- II. WAP to find out the sum of the numbers between 1 to 100 which are not divisible by 2,4 and 7.

2. Task to be done/ Which logistics used:

- I. Check and print the Armstrong number.
- II. Check and print the sum of the numbers between 1 to 100 which is not divisible by 2,4 and 7.

3. Steps for experiment/practical/Code:

- I. Check and print the Armstrong number.

Source Code:

```
num = int(input("Please Enter the Number: "))
order = len(str(num))
sum = 0
temp = num

while temp > 0:
    digit = temp % 10
    sum += digit ** order
    temp //= 10

if num == sum:
    print(num,"is an Armstrong number")
else:
    print(num,"is not an Armstrong number")
```

- II. Check and print the sum of the numbers between 1 to 100 which is not divisible by 2, 4 and 7.

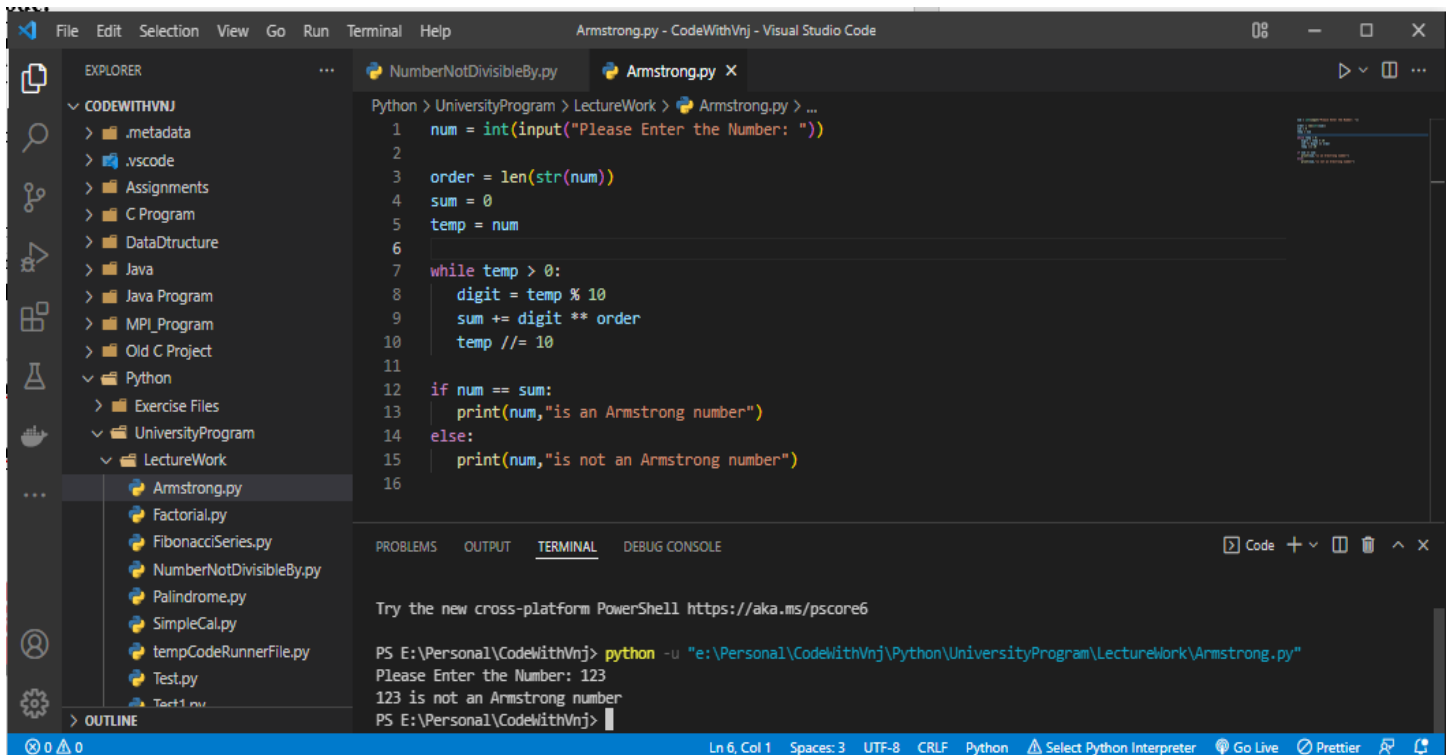
Source Code:

```
n = 1
max_num = 100
sum = 0
print("Sum of the Numbers not divisible by 2, 4 and 7 is ",end="")
while n <= max_num:
    if n % 2 != 0 and n % 4 != 0 and n % 7 != 0:
        sum+=n
    n = n+1
print(sum)
```

4. Result/Output/Writing Summary:

- I. Check and print the Armstrong number.

Output:

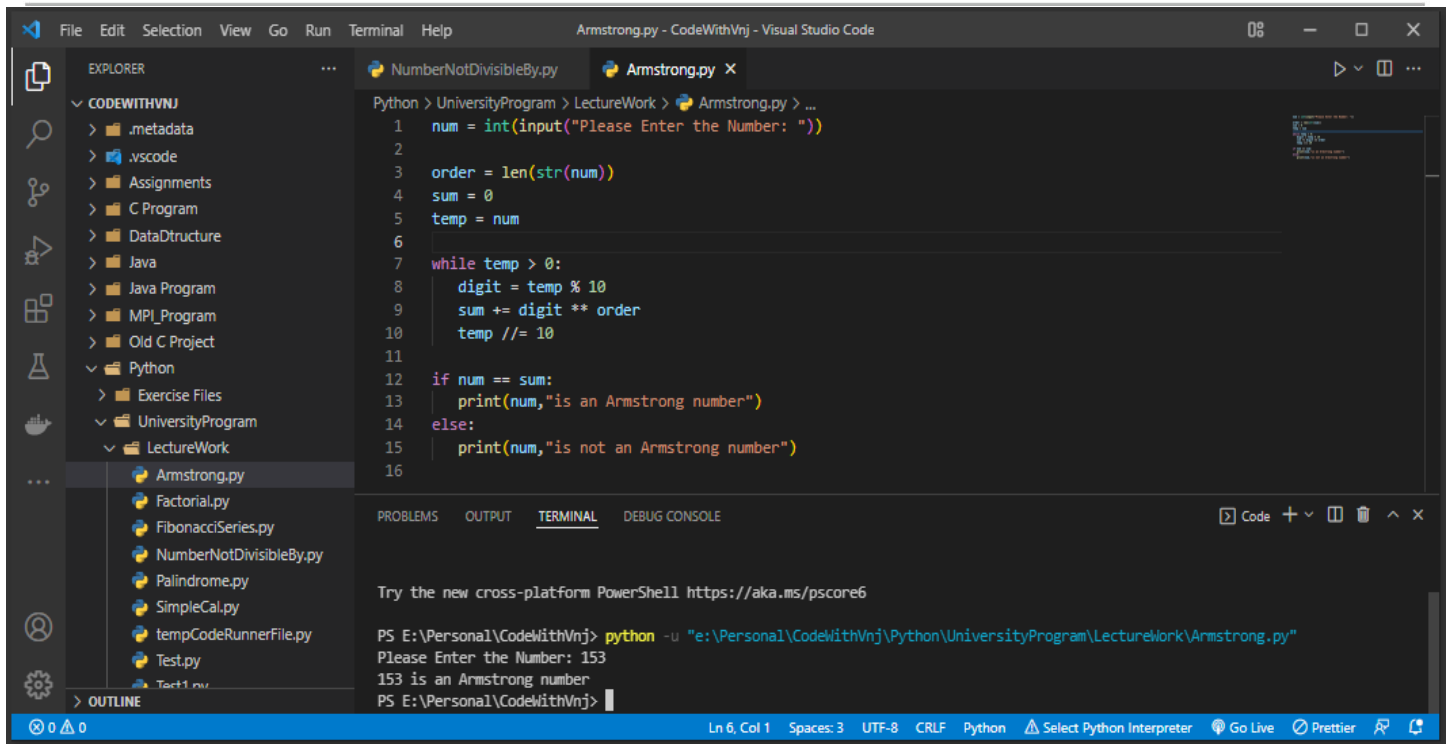


The screenshot shows the Visual Studio Code interface with the file 'Armstrong.py' open. The code in the editor is as follows:

```
1 num = int(input("Please Enter the Number: "))
2
3 order = len(str(num))
4 sum = 0
5 temp = num
6
7 while temp > 0:
8     digit = temp % 10
9     sum += digit ** order
10    temp //= 10
11
12 if num == sum:
13     print(num,"is an Armstrong number")
14 else:
15     print(num,"is not an Armstrong number")
16
```

The terminal at the bottom shows the execution of the script:

```
PS E:\Personal\CodeWithVnj> python -u "e:\Personal\CodeWithVnj\Python\UniversityProgram\LectureWork\Armstrong.py"
Please Enter the Number: 123
123 is not an Armstrong number
PS E:\Personal\CodeWithVnj>
```



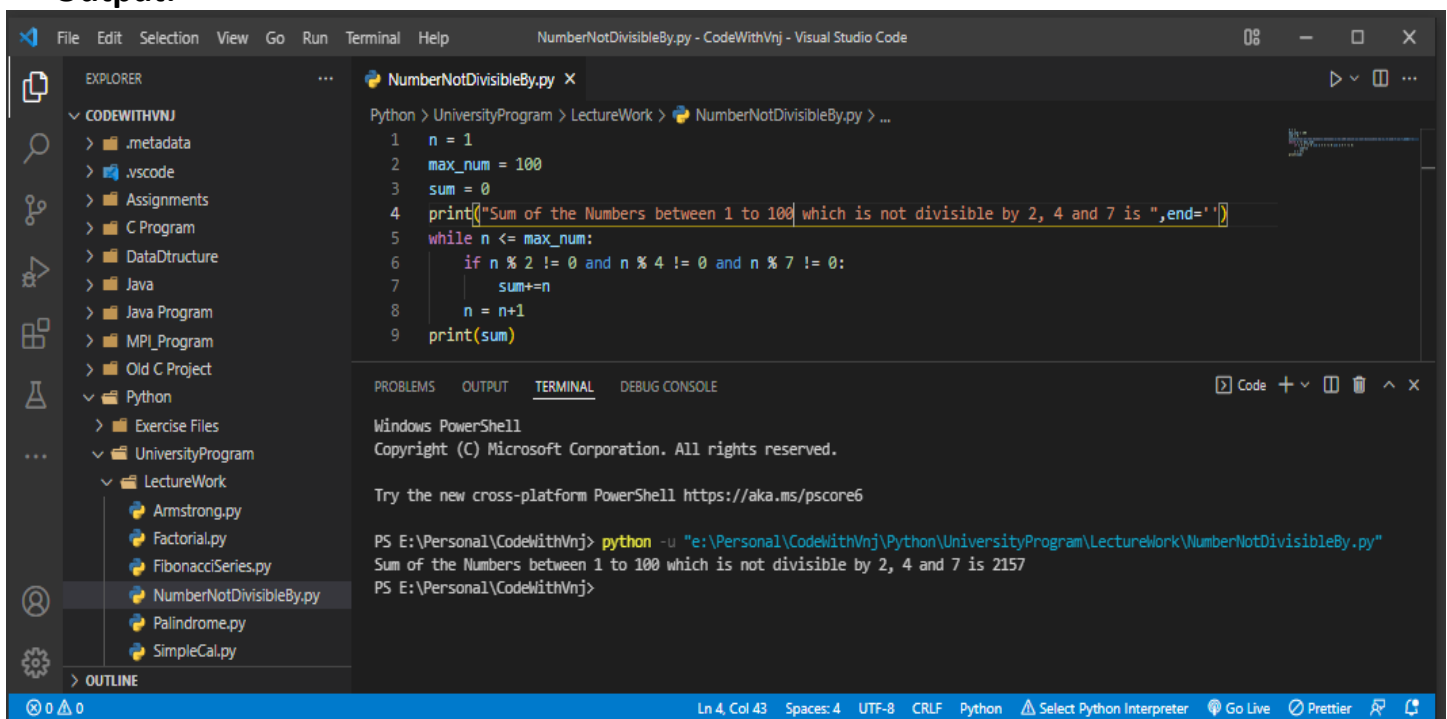
```

Python > UniversityProgram > LectureWork > Armstrong.py > ...
1 num = int(input("Please Enter the Number: "))
2
3 order = len(str(num))
4 sum = 0
5 temp = num
6
7 while temp > 0:
8     digit = temp % 10
9     sum += digit ** order
10    temp //= 10
11
12 if num == sum:
13     print(num,"is an Armstrong number")
14 else:
15     print(num,"is not an Armstrong number")
16
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
Try the new cross-platform PowerShell https://aka.ms/pscore6
PS E:\Personal\CodeWithVnj> python -u "e:\Personal\CodeWithVnj\Python\UniversityProgram\LectureWork\Armstrong.py"
Please Enter the Number: 153
153 is an Armstrong number
PS E:\Personal\CodeWithVnj>

```

II. Check and print the sum of the numbers between 1 to 100 which is not divisible by 2, 4 and 7.

Output:



```

Python > UniversityProgram > LectureWork > NumberNotDivisibleBy.py > ...
1 n = 1
2 max_num = 100
3 sum = 0
4 print("Sum of the Numbers between 1 to 100 which is not divisible by 2, 4 and 7 is ",end='')
5 while n <= max_num:
6     if n % 2 != 0 and n % 4 != 0 and n % 7 != 0:
7         sum+=n
8     n = n+1
9 print(sum)

```

Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

```

PS E:\Personal\CodeWithVnj> python -u "e:\Personal\CodeWithVnj\Python\UniversityProgram\LectureWork\NumberNotDivisibleBy.py"
Sum of the Numbers between 1 to 100 which is not divisible by 2, 4 and 7 is 2157
PS E:\Personal\CodeWithVnj>

```

Learning outcomes (What I have learnt):

1. I have learnt, how to find Armstrong Number.
2. Learnt to use of and All Operators, including loops and conditions.

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			