# GANPAT UNIVERSITY
## U. V. PATEL COLLEGE OF ENGINEERING
### B.Tech CE/IT Semester IV
### 2CEIT404: Python Programming

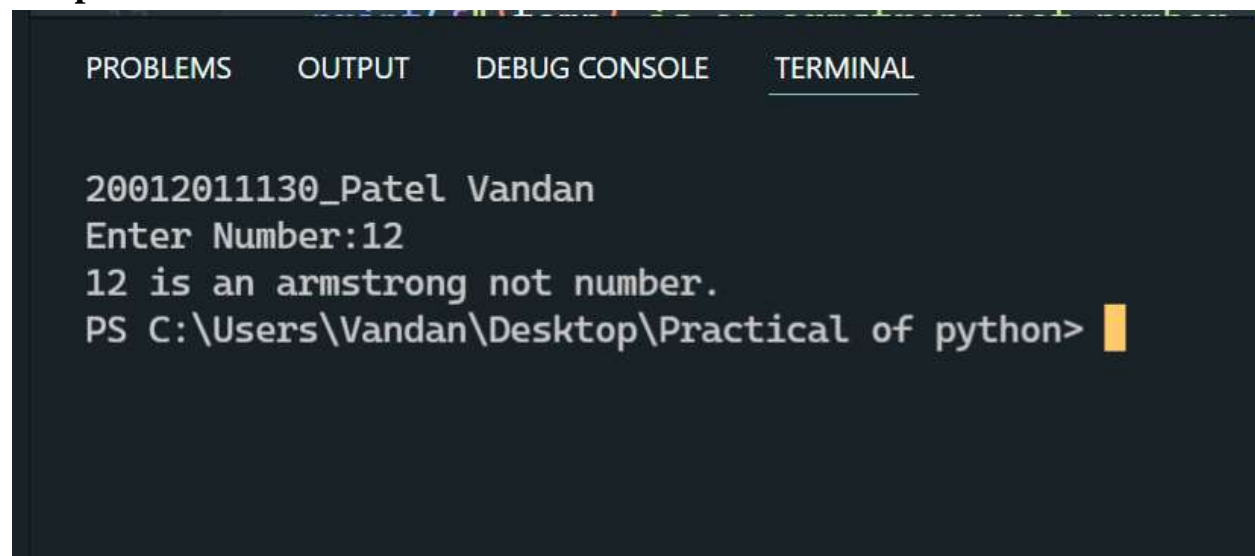## Practical-3: Iterative Statements and Strings

1. Write a program to check if number is Armstrong.

**Code:**

```python
print("20012011130_Patel Vandan")
num=int(input("Enter Number:"))
sum=0
temp=num
while(num>0):
    num1 = num % 10
    sum = sum + num1 ** 3
    num = int(num / 10)

if(sum==temp):
    print(f"{temp} is an armstrong number.")
else:
    print(f"{temp} is an armstrong not number.")
```

**Output:**

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL


20012011130_Patel Vandan
Enter Number:12
12 is an armstrong not number.
PS C:\Users\Vandan\Desktop\Practical of python>
```
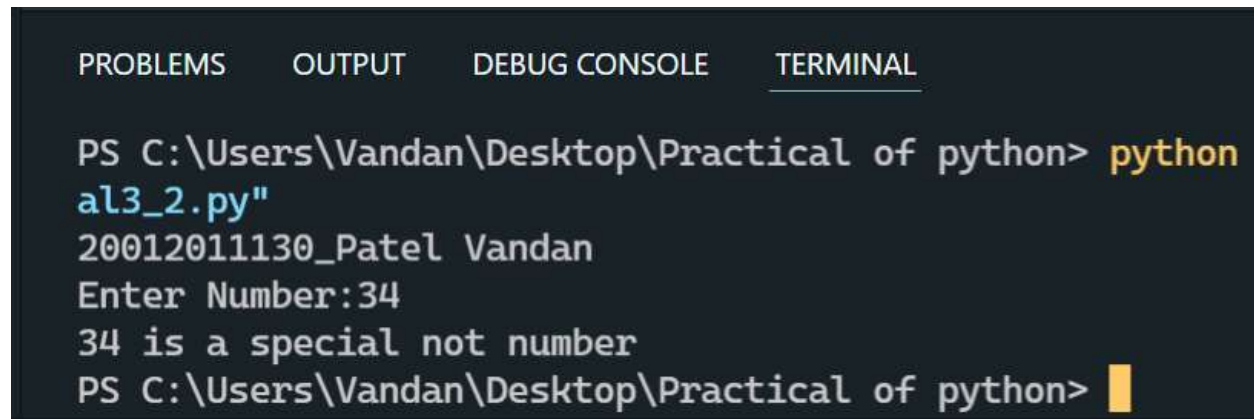
2. Write a program to check special number. (Number is equal to the sum of its divisors)

**Code:**

```python
print("20012011130_Patel Vandan")
num =int(input("Enter Number:"))
sum=0
for i in range(1,num):
    if(num % i == 0):
        sum = sum +i

if(num == sum):
    print(f"{num} is a special number")
else:
    print(f"{num} is a special not number")
```

**Output:**

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL

PS C:\Users\Vandan\Desktop\Practical of python> python
al3_2.py"
20012011130_Patel Vandan
Enter Number:34
34 is a special not number
PS C:\Users\Vandan\Desktop\Practical of python>
```

3. Create a program that will print out words that start with 's' from the below given statement.

st='Print only the words that start with s in this sentence'

**Code:**

```python
print("20012011130_Pateel Vandan")
```

```
st='Print only the words that start with s in this sentence'
for i in st.split():
    if(i[0] == 's'):
        print(i)
```

**Output:**

PROBLEMS        OUTPUT        DEBUG CONSOLE        TERMINAL

20012011130_Pateel Vandan
start
s
sentence
system
PS C:\Users\Vandan\Desktop\Practical of python> 

4. Write a program to give output of entered number multiplication table.

**Code:**

```
print("20012011130_Patel Vandan")
num = int(input("Enter a number: "))
sum = 0
for i in range(1,11):
    sum = num * i
    print(num , " * " , i , " = " , sum)
```

**Output:**

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL

PS C:\Users\Vandan\Desktop\Practical of python> python -u "c:\
al3_4.py"
20012011130_Patel Vandan
Enter a number: 10
10  *  1  =  10
10  *  2  =  20
10  *  3  =  30
10  *  4  =  40
10  *  5  =  50
10  *  6  =  60
10  *  7  =  70
10  *  8  =  80
10  *  9  =  90
10  *  10 = 100
PS C:\Users\Vandan\Desktop\Practical of python>
```

5. Write a program to find the sum of digit of an input number using while loop.

**Code:**

```python
print("20012011130_Patel Vandan")
num=int(input("Enter Number:"))
sum=0
temp=num
while(num>0):
    num1=num%10
    sum=sum+num1
    num=int(num/10)

print(f"Sum of the given number {temp} is {sum}")
```

**Output:**

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL

PS C:\Users\Vandan\Desktop\Practical of python> python -u "c:
eRunnerFile.py"
20012011130_Patel Vandan
Enter Number:5
Sum of the given number 5 is 5
PS C:\Users\Vandan\Desktop\Practical of python>
```

6.  Go to String below and if the length of a word is even print "even!".

    st='I love doing python programming in spyder'

**Code:**
```
print("20012011130_Patel Vandan")
st='I love doing python programming in spyder'

for i in (st.split()):
    if(len(i) % 2 == 0):
        print(f"Length of word {i} is even")
```

**Output:**

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL

PS C:\Users\Vandan\Desktop\Practical of python> python -u "c:\Users
al3_6.py"
20012011130_Patel Vandan
Length of word love is even
Length of word python is even
Length of word in is even
Length of word spyder is even
PS C:\Users\Vandan\Desktop\Practical of python>
```

7.  Write a program to count number of digits, upper-case characters and lower-case characters from the string.

**Code:**

```python
print("20012011130_Patel Vandan")
st = input("Enter statement:")
upper,lower,digit,special=0,0,0,0
for i in st:
    if(i>='A' and i<='Z'):
        upper+=1
    elif(i>='a' and i<='z'):
        lower+=1
    elif(i>='0' and i<='9'):
        digit+=1
    else:
        special+=1
print("Uperercase count=",upper)
print("Lowercase count=",lower)
print("diditcase count=",digit)
print("specialcase count=",special)
```

**Output:**

```
PROBLEMS     OUTPUT     DEBUG CONSOLE     TERMINAL

20012011130_Patel Vandan
Enter statement:vandan patel
Uperercase count= 0
Lowercase count= 11
diditcase count= 0
specialcase count= 1
PS C:\Users\Vandan\Desktop\Practical of python>
```

8. Write a python program to check if a string is a palindrome or not.

**Code:**

```python
print("20012011130_Patel Vandan")
str1 ='hello'
str2 =''

for i in str1:
    str2 = str2 + i
if(str1 == str2):
    print(f"{str1} is a palindrome string.")
else:
    print(f"{str1} is a palindrome not string.")
```

**Output:**

```
PROBLEMS     OUTPUT     DEBUG CONSOLE     TERMINAL

20012011130_Patel Vandan
hello is a palindrome string.
PS C:\Users\Vandan\Desktop\Practical of python>
```

9. Write a python program to remove i'th character from string.

**Code:**

```
print("20012011130_Patel Vandan")
st = 'hello'
i=1
st=st[0:i]+st[i+1:]
print(st)
```

**Output:**

```
PROBLEMS      OUTPUT      DEBUG CONSOLE      TERMINAL


20012011130_Patel Vandan
hllo
PS C:\Users\Vandan\Desktop\Practical of python>
```

10. Write a python program to check if the substring is present in a given string.

**Code:**

```
print("20012011130_Patel Vandan")
expression="I am Student of Ganpat University"
print("Expression : ",expression)
str= "Ganpat"
print("present in expression : ",str in expression)
```

**Output:**

PROBLEMS     OUTPUT     DEBUG CONSOLE     TERMINAL

Expression :  I am Student of Ganpat University
present in expression :  True
PS C:\Users\Vandan\Desktop\Practical of python>