Practical-3: Iterative Statements and Strings

1) Write a program to check if number is Armstrong.
Code:

```
print("21012021003_AMIT GOSWAMI")
num=int(input("Enter a number : "))
num1=num
sum=0
count=0
while(num1>0):
    num1 = num1 // 10
    count+=1

print("number of digits are:",count)

num2=num1
while(num2>0):

    s=num2%10
    sum=sum+s**count
    num2=int(num2/10)
if(sum==num2):
  print("This is an armstrong number :{}".format(num))
else:
  print("This is not an armstrong number :")
```

Output:

```
21012021003_AMIT GOSWAMI
Enter a number : 371
number of digits are: 3
This is an armstrong number :371
```

2) Write a program to check special number. (Number is equal to the sum of its divisors)
Code:

```
print("21012021003_AMIT GOSWAMI")
num=int(input("Enter a number : "))
temp=num
sum=0
for i in range(1,num):

    if(num%i==0):
        sum=sum+i
if(sum==temp):
    print("Number is special number : {}".format(temp))
else:
    print("Number is not special number :{}".format(temp))
```

Output:

```
21012021003_AMIT GOSWAMI
Enter a number : 54
Number is not special number :54
```

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```
21012021003_AMIT GOSWAMI
Enter a number : 6
Number is special number : 6
```

3) Write 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:

```
print("21012021003_AMIT GOSWAMI")
st="Print only the words that start with s in this sentence"
l1=st.split()
for i in l1:
    if(i.startswith('s')):
        print(i)
```

Output:

```
21012021003_AMIT GOSWAMI
start
s
sentence
```

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

```
print("21012021003_AMIT GOSWAMI")
num=int(input("Enter a number"))
for i in range(1,11):
    print(f"{num}*{i}={num*i}")
```

Output:

```
21012021003_AMIT GOSWAMI
Enter a number 45
45*1=45
45*2=90
45*3=135
45*4=180
45*5=225
45*6=270
45*7=315
45*8=360
45*9=405
45*10=450
```

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

```
print("21012021003_AMIT GOSWAMI")
num=int(input("Enter a number : "))
sum=0
while(num>0):
    s=num%10
```

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```
        sum=sum+s
        num=int(num/10)
print("Addition of entered number is :{}".format(sum))
```

Output:

```
21012021003_AMIT GOSWAMI
Enter a number : 456
Addition of entered number is :15
```

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("21012021003_AMIT GOSWAMI")
st="I love doing python programming in spyder"
li=st.split()
for i in li:
    if(len(i)%2==0):
        print("the length of {} is even".format(i))
```

Output:

```
21012021003_AMIT GOSWAMI
the length of love is even
the length of python is even
the length of in is even
the length of spyder is even
```

7) Write a program to calculate frequency of digit, upper case character and lower case character from the string.
Code:

```
str=input("Enter your letter : ")
d=0
u=0
l=0
for i in str:
    if(i>='A' and i<='Z'):
        u=u+1
    if(i>='a' and i<='z'):
        l=l+1
    if(i>='0' and i<='9'):
        d=d+1

print(f"No of d : {d} \n No of u : {u} \n No of l :{l}\n")
```

Output:

```
Enter your letter : Amitgoswami698@gmail.com
No of d : 3
 No of u : 1
 No of l :18
```

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

```
print("21012021003_AMIT GOSWAMI")
str=input("Enter your word : ")
st=str[::-1]
if(str==st):
    print("It is palindrome.")
else:
    print("It is not palindrome.")
```

Output:

```
21012021003_AMIT GOSWAMI
Enter your word : malayalam
It is palindrome.
```

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

```
print("21012021003_AMIT GOSWAMI")
str=input("Enter your word : ")
n=int(input("Enter the number : "))
s=str[:n]+str[n+1:]
print(s)
```

Output:

```
21012021003_AMIT GOSWAMI
Enter your word : KISNAA
Enter the number : 5
KISNA
```

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

```
print("21012021003_AMIT GOSWAMI")
str=input("Enter your word : ")
n=input("Enter substring you want to find : ")
if(str.find(n)==-1):
    print("string not found.")
else:
    print("string found.")
```

Output:

```
21012021003_AMIT GOSWAMI
Enter your word : HAPPY LIFE
Enter substring you want to find : LIFE
string found.
```

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