6th October 2020	18CS2064	URK17CS304

EXP 7	BASIC PYTHON PROGRAMS

Aim:

To write the following programs in python.

Question 1:

Basic python program for designing calculator

SOURCE CODE:

CALCULATOR.py - C:\Users\User\AppData\Local\Programs\Python\Python37\CALCULATOR....

File Edit Format Run Options Window Help

```
#CALCULATOR
a = int(input("ENTER THE FIRST NUMBER"))
b = int(input("ENTER THE SECOND NUMBER"))
print(" PRESS 1 FOR ADDITION\n PRESS 2 FOR SUBTRACTION\n PRESS 3 FOR DIVISION\n
c = input("ENTER YOUR CHOICE")

if c == "1":
    r = a + b
    print("SUM = " +str(r))
elif c == "2":
    r = a - b
    print("DIFFERENCE = " +str(r))
elif c == "3":
    r = a/b
    print("QUOTIENT = " +str(r))
elif c == "4":
    r = a%b
    print("REMAINDER = " +str(r))
elif c == "5":
    r = a * b
    print("PRODUCT = " +str(r))
elif c == "6":
    r = a*a
    s = b*b
    print("SQUARE OF:")
    print("FIRST NO = " +str(r))
    print("SECOND NO = " +str(s))
elif c == "7":
    r = a*a*a
    s = b*b*b
    print("CUBE OF:")
    print("FIRST NO = " +str(r))
    print("SECOND NO = " +str(s))
elif c == "8":
    print("EXITING...")
    #exit()
```

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OUTPUT:

```
 RESTART: C:\Users\User\AppDat
ENTER THE FIRST NUMBER7
ENTER THE SECOND NUMBER5
 PRESS 1 FOR ADDITION
 PRESS 2 FOR SUBTRACTION
 PRESS 3 FOR DIVISION
 PRESS 4 FOR MOD
 PRESS 5 FOR MULTIPICATION
 PRESS 6 TO SQUARE
 PRESS 7 TO CUBE
 PRESS 8 TO EXIT
ENTER YOUR CHOICE1
SUM = 12
```

```
 RESTART: C:\Users\User\AppD
ENTER THE FIRST NUMBER7
ENTER THE SECOND NUMBER5
 PRESS 1 FOR ADDITION
 PRESS 2 FOR SUBTRACTION
 PRESS 3 FOR DIVISION
 PRESS 4 FOR MOD
 PRESS 5 FOR MULTIPICATION
 PRESS 6 TO SQUARE
 PRESS 7 TO CUBE
 PRESS 8 TO EXIT
ENTER YOUR CHOICE2
DIFFERENCE = 2
>>>
```

```
 RESTART: C:\Users\User\AppD
ENTER THE FIRST NUMBER7
ENTER THE SECOND NUMBER5
 PRESS 1 FOR ADDITION
 PRESS 2 FOR SUBTRACTION
 PRESS 3 FOR DIVISION
 PRESS 4 FOR MOD
 PRESS 5 FOR MULTIPICATION
 PRESS 6 TO SQUARE
 PRESS 7 TO CUBE
 PRESS 8 TO EXIT
ENTER YOUR CHOICE3
QUOTIENT = 1
```

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```
ENTER THE FIRST NUMBER7
ENTER THE SECOND NUMBER5
 PRESS 1 FOR ADDITION
 PRESS 2 FOR SUBTRACTION
 PRESS 3 FOR DIVISION
 PRESS 4 FOR MOD
 PRESS 5 FOR MULTIPICATION
 PRESS 6 TO SQUARE
 PRESS 7 TO CUBE
 PRESS 8 TO EXIT
ENTER YOUR CHOICE4
REMAINDER = 2
>>>
```

```
ENTER THE FIRST NUMBER7
ENTER THE SECOND NUMBER5
 PRESS 1 FOR ADDITION
 PRESS 2 FOR SUBTRACTION
 PRESS 3 FOR DIVISION
 PRESS 4 FOR MOD
 PRESS 5 FOR MULTIPICATION
 PRESS 6 TO SQUARE
 PRESS 7 TO CUBE
 PRESS 8 TO EXIT
ENTER YOUR CHOICE5
PRODUCT = 35
>>>
```

```
ENTER THE FIRST NUMBER7
ENTER THE SECOND NUMBER5
 PRESS 1 FOR ADDITION
 PRESS 2 FOR SUBTRACTION
 PRESS 3 FOR DIVISION
 PRESS 4 FOR MOD
 PRESS 5 FOR MULTIPICATION
 PRESS 6 TO SQUARE
 PRESS 7 TO CUBE
 PRESS 8 TO EXIT
ENTER YOUR CHOICE6
SQUARE OF:
FIRST NO = 49
SECOND NO = 25
>>>
```

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Question 2:

Find whether the given number is perfect number or not

SOURCE CODE:

PERFECT_NUM.py - C:/Users/User/AppData/Local/Programs/Python/Python37/PERFECT_NU...

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```
#FIND WHETHER THE GIVEN NUMBER IS PERFECT OR NOT
#6 - 2,3,1 --- ADD THE DIVISOR AND IT SHOULD GIVE THE SAME NUMBER

n = int(input("ENTER A NUMBER"))
SUM = 0
for i in range(1, n):
    if n % i == 0:
        SUM += i
if SUM == n:
    print(str(n), "is a perfect number")
else:
    print(str(n), "is not a perfect number")
```

OUTPUT:

```
 RESTART: C:/Users/User/AppD
ENTER A NUMBER12
12 is not a perfect number
>>>
 RESTART: C:/Users/User/AppD
ENTER A NUMBER6
6 is a perfect number
>>>
```

Question 3:

Find whether the given number is Adam's number or not.

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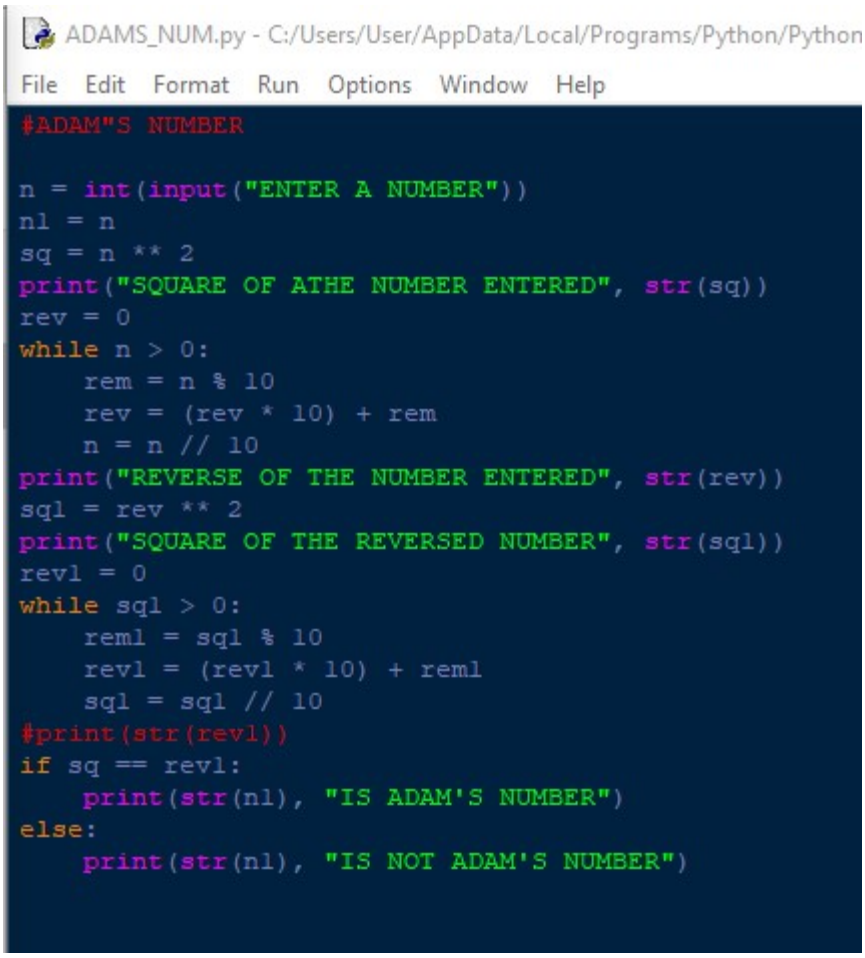
SOURCE CODE:



OUTPUT:

```
= RESTART: C:/Users/User/AppData/Local/Pr
ENTER A NUMBER12
SQUARE OF ATHE NUMBER ENTERED 144
REVERSE OF THE NUMBER ENTERED 21
SQUARE OF THE REVERSED NUMBER 441
12 IS ADAM'S NUMBER
>>>
```

```
= RESTART: C:/Users/User/AppData/Loca
ENTER A NUMBER17
SQUARE OF ATHE NUMBER ENTERED 289
REVERSE OF THE NUMBER ENTERED 71
SQUARE OF THE REVERSED NUMBER 5041
17 IS NOT ADAM'S NUMBER
>>>
```

Question 4:

Write a program to check whether the given number is Armstrong or not.

SOURCE CODE:

ARMSTRONG.py - C:/Users/User/AppData/Local/Programs/Pythor

File Edit Format Run Options Window Help

```
#ARMSTRONG

n = int(input("ENTER A NUMBER"))
l = len(str(n))
t = n
s = 0
while t > 0:
    dig = t%10
    s += dig ** l
    t = t // 10

if n == s:
    print(n, "is an Armstrong number")
else:
    print(n, "is not an Armstrong number")
```

OUTPUT:

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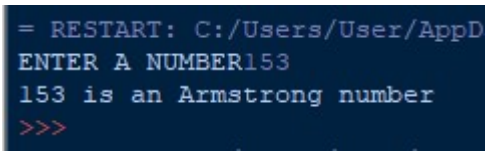
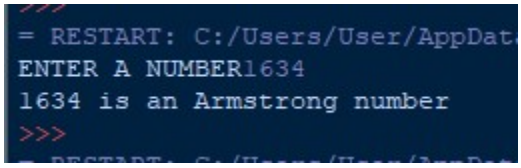
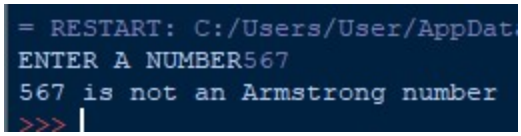
3 digit:



4 digit:



Not an Armstrong number:



Result:

The following python programs are run successfully.