ASSIGNMENT 3

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# 1. Write a Python program to your name, phone number, and email 10 times.
name = "Arpita Patnaik"
phn = 1234567890
email = "arpita56@gmail.com"
for i in range(10):
    print(f"Name: {name}, Phone: {phn}, Email: {email}")
```

```
Name: Arpita Patnaik, Phone: 1234567890, Email: arpita56@gmail.com
Name: Arpita Patnaik, Phone: 1234567890, Email: arpita56@gmail.com
Name: Arpita Patnaik, Phone: 1234567890, Email: arpita56@gmail.com
Name: Arpita Patnaik, Phone: 1234567890, Email: arpita56@gmail.com
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Name: Arpita Patnaik, Phone: 1234567890, Email: arpita56@gmail.com
```

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# 2. Write a Python program to print the multiplication table of a given number.
num = int(input("Enter a number: "))
for i in range(1, 11):
    print(f"{num} x {i} = {num * i}")
```

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Enter a number: 8
8 x 1 = 8
8 x 2 = 16
8 x 3 = 24
8 x 4 = 32
8 x 5 = 40
8 x 6 = 48
8 x 7 = 56
8 x 8 = 64
8 x 9 = 72
8 x 10 = 80
```

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# 3. Write a Python program to compute the sum of squares of first n natural numbers using loop.
n = int(input("Enter a natural number n: "))
ss = 0
for i in range(1, n + 1):
    ss += i ** 2

print(f"The sum of squares of first {n} natural numbers is: {ss}")
```

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Enter a natural number n: 12
The sum of squares of first 12 natural numbers is: 650
```

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# 4. Write a Python program to compute the sum 1/1 + 2/3 + 3/5 + 4/7 nth term
n = int(input("Enter a natural number n: "))
sum_series = 0
for i in range(1, n + 1):
    num = i
    den = 2 * i - 1
    sum_series += num/ den

print(f"The sum of the series 1/1 + 2/3 + 3/5 + ... + {n}/{2*n-1} is: {sum_series}")
```

```
Enter a natural number n: 6
The sum of the series 1/1 + 2/3 + 3/5 + ... + 6/11 is: 3.9391053391053386
```

```
# 5. Write a Python program to compute the sum of digits of a given number.
num = int(input("Enter a number: "))
t = num
sum_digits = 0
while num > 0:
    dig = num % 10
    sum_digits += dig
    num //= 10
print(f"The sum of digits of {t} is: {sum_digits}")
```

```
Enter a number: 45621
The sum of digits of 45621 is: 18
```

```python
# 6. Write a Python program to check whether the given number is a palindrome or not.
num = int(input("Enter a number: "))
t = num
rev = 0
while num > 0:
    dig = num % 10
    rev = rev * 10 + dig
    num //= 10
if t == rev:
    print(f"{t} is a palindrome")
else:
    print(f"{t} is not a palindrome")
```

```
Enter a number: 1331
1331 is a palindrome
```

```python
# 7. Write a Program to check whether the given number is an Armstrong number or not.
num = int(input("Enter a number: "))
t = num
sum = 0
c = 0
while num > 0:
    dig = num % 10
    c += 1
    num //= 10

num = t
while num > 0:
    dig = num % 10
    sum += dig ** c
    num //= 10

if t == sum:
    print(f"{t} is an Armstrong number")
else:
    print(f"{t} is not an Armstrong number")
```

```
Enter a number: 1536
1536 is not an Armstrong number
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```python
# 8. Write a Python program to compute the factorial of a number.
n = int(input("Enter a number: "))
fact = 1
for i in range(1, n + 1):
    fact *= i

print(f"The factorial of {n} is: {fact}")
```

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Enter a number: 9
The factorial of 9 is: 362880
```

```python
# 9. Write a Python program to print prime numbers between a given range.
start = int(input("Enter the start of the range: "))
end = int(input("Enter the end of the range: "))
for n in range(start, end+1):
    for i in range(2, n):
        if n % i == 0:
            break
    else:
        print(n, end=" ")
```

```
Enter the start of the range: 13
Enter the end of the range: 50
13 17 19 23 29 31 37 41 43 47
```

```python
# 10. Write a Python program to print first n Fibonacci numbers.
n = int(input("Enter the number of Fibonacci numbers to print: "))
a, b = 0, 1
print("Fibonacci sequence:")
for i in range(n):
    print(a, end=" ")
    a, b = b, a + b
```

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Enter the number of Fibonacci numbers to print: 10
Fibonacci sequence:
0 1 1 2 3 5 8 13 21 34
```

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# 11. Write a Python program to find the numbers, which are divisible by the sum of
# their digits. (e.g. 12) between 1 to 10000.

for i in range(1, 10001):
    num = i
    sum_digits = 0
    while num > 0:
        dig = num % 10
        sum_digits += dig
        num //= 10
    if i % sum_digits == 0:
        print(i, end=" ")
```

```
1 2 3 4 5 6 7 8 9 10 12 18 20 21 24 27 30 36 40 42 45 48 50 54 60 63 70 72 80 81 84 90 100 102 108 110 111 112 114 117 120 126 132 1
```

```
# 12. Write a Python program to find the nearest number to 1000, which is less than
# 1000, and divisible by 18 and 32.

near = 1000
while near > 0:
    if near % 18 == 0 and near % 32 == 0:
        print(f"The nearest number to 1000 divisible by 18 and 32 is: {near}")
        break
    near -= 1
```

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The nearest number to 1000 divisible by 18 and 32 is: 864
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# 13. Write a Python program to check whether a given number is a perfect square or not.
import math

n = int(input("enter a number: "))

root = int(math.sqrt(n))
if root * root == n:
    print(f"{n} is a perfect square")
else:
    print(f"{n} is not a perfect square")
```

```
enter a number: 81
81 is a perfect square
```

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# 14. Write a Python program to print the nth digit of a number from the right.
# (e.g. in 18568, 6 is second from right)

n = int(input("Enter a number: "))
pos = int(input("enter the position : "))
t = pos
while pos > 0 and n > 0:
    dig = n % 10
    if pos == 1:
        print(f"The {t}th digit from the right is: {dig}")
        break
    n //= 10
    pos -= 1
```

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Enter a number: 16254
enter the position : 2
The 2th digit from the right is: 5
```

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# 15. Write a Python program to check whether the digits of a given number are equal.
num = int(input("Enter a number: "))
t = num//10
while num > 0:
    a = num % 10
    b = t % 10
    if a != b:
        print(f"Digits are not equal")
        break
    num //= 10
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else:
    print(f"All digits are equal")
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```
Enter a number: 555
All digits are equal
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