

Floxed Education

7/3/2021

Python Bootcamp101

Assignment 1

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1. Write a program to check a number is even or odd using bitwise operator?

Program:

```
N = int(input("Enter Number: "))

if N & 1:

    print(N, "is an odd number.")

else:

    print(N, "is an even number.")
```

2. Write a program to calculate 2^x using bitwise operator?

Program:

```
n = int(input("Enter power of two: "))

powerOfTwo = 2 << (n-1)

print(powerOfTwo)
```

3. Write a program to print the following number pyramid?

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

Program:

```
n = 5

num = 1

for i in range(0, n):

    num = 1

    for j in range(0, i + 1):

        print(num, end=" ")

        num += 1

    print("\r")
```

4. Write a program to print the inverted pyramid?

```

* * * * *
* * * *
* * *
* *
*

```

Program:

```

n = 5

for i in range(5, 0, -1):

    for j in range(i, 0, -1):

        print("*", end=" ")

    print("\r")

```

5. Write a program to print the full pyramid?

```

      *
     * * *
    * * * * *
   * * * * * * *
  * * * * * * * *
 * * * * * * * *

```

Program:

```

n = 5

k = 0

for i in range(1, n + 1):

    for j in range(1, (n - i) + 1):

        print(end=" ")

    while k != (2 * i - 1):

        print("*", end=" ")

        k += 1

    k = 0

    print("\r")

```

6. Write a program to print Floyds Triangle?

```

1
2 3
4 5 6
7 8 9 10

```

Program:

```
n = 4

num = 1

for i in range(0, n):

    for j in range(0, i + 1):

        print(num, end=" ")

        num += 1

    print("\r")
```

7. Write a program to find the sum of first N natural number using for loop?

Program:

```
n = int(input("Enter the natural number: "))

sum = 0

for i in range(1, n + 1):

    sum += i

print("Sum of natural numbers from 1 to", n, "is", sum)
```

8. Write a program to print all the digits of a number?

SAMPLE INPUT

321
486

SAMPLE OUTPUT

3 2 1
4 8 6

Program:

```
while(1):

    m = int(input())

    x = str(m)

    length = len(x)

    for i in x:
```

```
print(i, end = " ")

print("\r")
```

9. Write a program to check whether a number is prime or not?

Program:

```
n = int(input("Enter number: "))

if n == 0 or n == 1:

    print(n, "is neither prime nor composite number.")

elif n > 1:

    for i in range(2, int(n // 2) + 1):

        if (n % i) == 0:

            print(n, "is not a prime number.")

            break

    else:

        print(n, "is a prime number.")

else:

    print(n, "is not a prime number.")
```

10. Write a program to print Binary representation of a given number N.

Program:

```
n = int(input())

binary = 0

count = 0

while (n != 0):

    rem = n % 2

    power = pow(10, count)

    binary += rem * power
```

```
n //= 2  
  
count += 1  
  
print(binary)
```

[Click here](#) to see the code.