

**YAY- Python Basics Course**

Practice Programs

***Difficulty Level- Easy, Medium and Hard***

Question 1- Question 5: Easy

Question 6- Question 10: Medium

Question 11- Question 15: Hard

1. **Python Program to check Armstrong Number.**

Given a number x, determine whether the given number is Armstrong number or not. A positive integer of n digits is called an Armstrong number of order n (order is number of digits) if-

abcd... = pow(a,n) + pow(b,n) + pow(c,n) + pow(d,n) + ....

*Input : 153*

*Output : Yes*

*153 is an Armstrong number.*

*1\*1\*1 + 5\*5\*5 + 3\*3\*3 = 153*

1. **Python Program for Sum of squares of first n natural numbers.**

Given a positive integer N. The task is to find .

1. **Python program to find Cumulative sum of a list.**

*Input : list = [10, 20, 30, 40, 50]*

*Output : [10, 30, 60, 100, 150]*

1. **Python Program to perform Binary Search.**
2. **Python Program to perform Bubble Sort.**
3. **Python Program to find the most occurring character in a String and also display its count.**

*Input : hello*

*Output : ('l', 2)*

1. **Python Program to remove all duplicate occurring tuple records.**
2. **Python Program to find most common element in a 2D list.**

*Input : [[10, 20, 30], [20, 50, 10], [30, 50, 10]]*

*Output : 10*

1. **Python Program to convert time from 12 hour to 24-hour format.**
2. **Python Program to get Current Date and Time using Python.**
3. **Python Program to perform Merge Sort. (Look up the logic behind Merge Sort.)**
4. **Python Program to for Print Number series without using any loop.**
5. **Menu-driven Python Program to store, update and delete contact numbers. (Look up what menu-driven means.)**
6. **Python Program to Count Uppercase, Lowercase, special character and numeric values using Regex. (Read up on Regex before solving this.)**
7. **Python – Draw Star Using Turtle Graphics.**

**Look it up on the internet and try to make it! Don’t forget to have fun 😊**