

# Python Questions list

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## Practical 1 – Basics

1. Write a python program that reads 2 number and perform all basic mathematical operation ( + , - , \* , / , // , \*\* , % ).
  2. Write a program that reads value of radius and calculate the area of circle.
  3. Write a program that reads value of length & width and calculate the area of rectangle.
  4. Write a program that reads value of base & height and calculate the area of triangle.
  5. Write a program that reads value of side and calculate the area of square.
  6. Write a program that reads value of radius and calculate the area of sphere.
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## Practical 2 - Conditional Statements

1. Write a Python program that reads two number and find largest number.
  2. Write a Python program that finds the smallest of three number.
  3. Write a Python program that reads a number and check if it's positive or negative.
  4. Write a Python program that reads a number and check if it's divisible by 3 or not.
  5. Write a Python program that reads a number and check if it's odd or even.
  6. Write a Python program that reads a number and check if it's odd or even as well as it is divisible by 3 or not.
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## Practical 3 - While Loop

1. Write a Python program to display 1 to n numbers using 'while loop'
2. Write a python program that calculates sum and average of 1 to n number using 'while loop'.
3. Write a python program to display 1 to n number in reverse order using 'while loop'.
4. Write a python program to display multiples of 3 (upto 3) using 'while loop'.
5. Write a python program to display all Even numbers between 1 to n using 'while loop'.
6. Write a python program to display all odd numbers between 1 to n and also calculate their sum and average using 'while loop'.
7. Write a python program to read a number and calculates it's factorial using 'while loop'.

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#### Practical 4 - For Loop

1. Write a Python program that display 1 to n where n is created as a list using 'for loop'.
2. Write a Python program that display 1 to n using range() function using 'for loop'.
3. Write a Python program that display all even numbers from 1 to n using 'for loop'.
4. Write a Python program that display all odd numbers in reverse order from 1 to n using 'for loop'.
5. Write a program that reads a string and display all characters using 'for loop'
6. Write a python program to read a number and calculates it's factorial using 'for loop'.
7. Write a python program to print the following structure by reading the value of 'n' where 'n' is the number of rows (n = 5):

(a)

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

(b)

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

(c)

```
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
```

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#### Practical 5 - Functions & Modules

1. Write a python program to calculate the addition of two numbers by creating a function.
2. Write a python program to calculate area of circle using a function.
3. Write a python program to find the largest of 3 numbers using function.
4. Write a python program that reads a number and calculates it's factorial using 'for loop ' in function.
- #5. Write a python program that calculates nCr using function ( $nCr = n! / r! * (n-r)!$ ).

6. Write a python program that reads a number and calculates factorial using recursive function.
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### **Practical 6 - Regular Expression**

1. Write a Python program to illustrate use of findall() function in 're'(regular expression).
  2. Write a Python program to illustrate use of search() function in 're'(regular expression).
  3. Write a Python program to illustrate use of split() function in 're'(regular expression).
  4. Write a Python program to illustrate use of sub() function in 're'(regular expression).
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### **Practical 7 - File Handling**

1. Write a python program that reads the contents of text file(the text file is already created by the name of all months )
  2. Write a Python program that reads the contents of file using for loop (character by character from a file named 'days.txt' it is created in notepad containing name of days)
  3. Write a python program that reads the contents of file using read() function, where the file is created in notepad containing the names of 5 cities.
  4. Write a Python program that reads the contents of file ('country.txt' created in notepad containing names of 5 countries) using readline() function.
  5. Write a Python program that writes in a file named 'friends.txt' by reading names of any 5 friends, and write them in File.
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### **Practical 8 - Stack**

1. Write a python program that implements the stack using list.
  2. Write a python program that implements Stack using Function.
  3. Write a python program that implements Stack using class.
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### **Practical 9 - Queue**

1. Write a python program that implements queue using list with numeric type of data
2. Write a python program that implements queue using list with string type of data

3. Write a python program that implements queue using class with different methods - enqueue, dequeue, display, size

- where,

enqueue is inserting element in queue,

dequeue is removing element from queue,

display is showing the queue elements,

size is giving the number of elements in queue.

4. Write a python program that implements queue using collection.dequeue

5. Write a python program that implements queue using 'queue.Queue'

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### **Practical 10 - Linked List**

1. Write a Python Program to implement singly Linked List using class.

2. Write a Python Program that implements linked list and insert a new node at the beginning.

3. Write a Python Program that implements linked list and insert a new node at the end.

4. Write a Python Program that implements linked list and insert a new node in between.