



Python Basics - 1

130+ Queries



1. Write a Python program to print the following string in a specific format (see the output).

Sample String :

```
"Twinkle, twinkle, little star, How I wonder what you are!  
Up above the world so high, Like a diamond in the sky.  
Twinkle, twinkle, little star, How I wonder what you are"
```

Output :

```
Twinkle, twinkle, little star,  
    How I wonder what you are!  
        Up above the world so high,  
        Like a diamond in the sky.  
Twinkle, twinkle, little star,  
    How I wonder what you are
```

2. Write a Python program to get the Python version you are using.

4. Write a Python program which accepts the radius of a circle from the user and compute the area.

Sample Output :

```
r = 1.1
```

```
Area = 3.8013271108436504
```

5. Write a Python program which accepts the user's first and last name and print them in reverse order with a space between them.

6. Write a Python program which accepts a sequence of comma-separated numbers from the user and generates a list and a tuple with those numbers.

Sample data : 3, 5, 7, 23

Output :

```
List : ['3', '5', '7', '23']
```

```
Tuple : ('3', '5', '7', '23')
```

7. Write a Python program to accept a filename from the user and print the extension of that.

Sample filename : abc.java

Output : java

8. Write a Python program to display the first and last colors from the following list.

color_list = ["Red", "Green", "White", "Black"]

9. Write a Python program to display the examination schedule. (extract the date from exam_st_date).

exam_st_date = (11, 12, 2014)

Sample Output : The examination will start from : 11 / 12 / 2014

10. Write a Python program that accepts an integer (n) and computes the value of $n+nn+nnn$.

Sample value of n is 5

Expected Result : 615

11. Write a Python program to print the documents (syntax, description etc.) of Python built-in function(s).

Sample function : abs()

Expected Result :

abs(number) -> number

Return the absolute value of the argument.

12. Write a Python program to print the calendar of a given month and year.

Note : Use 'calendar' module.

13. Write a Python program to print the following here document.

Sample string :

a string that you "don't" have to escape

This

is a multi-line

heredoc string -----> example

14. Write a Python program to calculate the number of days between two dates.

Sample dates : (2014, 7, 2), (2014, 7, 11)

Expected output : 9 days

15. Write a Python program to get the volume of a sphere with radius 6.

16. Write a Python program to get the difference between a given number and 17, if the number is greater than 17 return double the absolute difference.

17. Write a Python program to test whether a number is within 100 of 1000 or 2000.

18. Write a Python program to calculate the sum of three given numbers, if the values are equal then return three times of their sum.

19. Write a Python program to get a new string from a given string where "Is" has been added to the front. If the given string already begins with "Is" then return the string unchanged.

20. Write a Python program to get a string which is n (non-negative integer) copies of a given string.

21. Write a Python program to find whether a given number (accept from the user) is even or odd, print out an appropriate message to the user.

22. Write a Python program to count the number 4 in a given list.

23. Write a Python program to get the n (non-negative integer) copies of the first 2 characters of a given string. Return the n copies of the whole string if the length is less than 2.

24. Write a Python program to test whether a passed letter is a vowel or not.

25. Write a Python program to check whether a specified value is contained in a group of values.

Test Data :

```
3 -> [1, 5, 8, 3] : True
-1 -> [1, 5, 8, 3] : False
```

26. Write a Python program to create a histogram from a given list of integers.

27. Write a Python program to concatenate all elements in a list into a string and return it.

28. Write a Python program to print all even numbers from a given numbers list in the same order and stop the printing of any numbers that come after 237 in the sequence.
Sample numbers list :

```
numbers = [
    386, 462, 47, 418, 907, 344, 236, 375, 823, 566, 597, 978, 328, 615, 953, 345,
    399, 162, 758, 219, 918, 237, 412, 566, 826, 248, 866, 950, 626, 949, 687, 217,
    815, 67, 104, 58, 512, 24, 892, 894, 767, 553, 81, 379, 843, 831, 445, 742, 717,
    958, 743, 527
]
```

29. Write a Python program to print out a set containing all the colors from color_list_1 which are not present in color_list_2.

Test Data :

```
color_list_1 = set(["White", "Black", "Red"])
color_list_2 = set(["Red", "Green"])
```

Expected Output :

```
{'Black', 'White'}
```

30. Write a Python program that will accept the base and height of a triangle and compute the area.

31. Write a Python program to compute the greatest common divisor (GCD) of two positive integers.

32. Write a Python program to get the least common multiple (LCM) of two positive integers.

33. Write a Python program to sum of three given integers. However, if two values are equal the sum will be zero.

34. Write a Python program to sum of two given integers. However, if the sum is between 15 to 20 it will return 20.

35. Write a Python program that will return true if the two given integer values are equal or their sum or difference is 5.

36. Write a Python program to add two objects if both objects are an integer type.

37. Write a Python program to display your details like name, age, address in three different lines.

38. Write a Python program to solve $(x + y) * (x + y)$.

Test Data : $x = 4, y = 3$

Expected Output : $(4 + 3) ^ 2 = 49$

39. Write a Python program to compute the future value of a specified principal amount, rate of interest, and a number of years.

Test Data : amt = 10000, int = 3.5, years = 7

Expected Output : 12722.79

40. Write a Python program to compute the distance between the points (x1, y1) and (x2, y2).

41. Write a Python program to check whether a file exists.

42. Write a Python program to determine if a Python shell is executing in 32bit or 64bit mode on OS.

43. Write a Python program to get OS name, platform and release information.

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44. Write a Python program to locate Python site-packages.
 45. Write a python program to call an external command in Python.
 46. Write a python program to get the path and name of the file that is currently executing.
 47. Write a Python program to find out the number of CPUs using.
 48. Write a Python program to parse a string to Float or Integer.
 49. Write a Python program to list all files in a directory in Python.
 50. Write a Python program to print without newline or space.
 51. Write a Python program to determine profiling of Python programs.
- Note: A profile is a set of statistics that describes how often and for how long various parts of the program executed. These statistics can be formatted into reports via the pstats module.
52. Write a Python program to print to stderr.
 53. Write a python program to access environment variables.
 54. Write a Python program to get the current username
 55. Write a Python to find local IP addresses using Python's stdlib
 56. Write a Python program to get the height and width of the console window.
 57. Write a program to get execution time for a Python method.
 58. Write a python program to find the sum of the first n positive integers.
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59. Write a Python program to convert height (in feet and inches) to centimeters.
 60. Write a Python program to calculate the hypotenuse of a right angled triangle.
 61. Write a Python program to convert the distance (in feet) to inches, yards, and miles.
 62. Write a Python program to convert all units of time into seconds.
 63. Write a Python program to get an absolute file path.
 64. Write a Python program to get file creation and modification date/times.
 65. Write a Python program to convert seconds to day, hour, minutes and seconds.
 66. Write a Python program to calculate body mass index.
 67. Write a Python program to convert pressure in kilopascals to pounds per square inch, a millimeter of mercury (mmHg) and atmosphere pressure.
 68. Write a Python program to calculate the sum of the digits in an integer.
 69. Write a Python program to sort three integers without using conditional statements and loops.
 70. Write a Python program to sort files by date.
 71. Write a Python program to get a directory listing, sorted by creation date.
 72. Write a Python program to get the details of the math module.
 73. Write a Python program to calculate midpoints of a line.
 74. Write a Python program to hash a word.
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75. Write a Python program to get the copyright information.
 76. Write a Python program to get the command-line arguments (name of the script, the number of arguments, arguments) passed to a script.
 77. Write a Python program to test whether the system is a big-endian platform or little-endian platform.
 78. Write a Python program to find the available built-in modules.
 79. Write a Python program to get the size of an object in bytes.
 80. Write a Python program to get the current value of the recursion limit.
 81. Write a Python program to concatenate N strings.
 82. Write a Python program to calculate the sum over a container.
 83. Write a Python program to test whether all numbers of a list are greater than a certain number.
 84. Write a Python program to count the number occurrence of a specific character in a string.
 85. Write a Python program to check whether a file path is a file or a directory.
 86. Write a Python program to get the ASCII value of a character.
 87. Write a Python program to get the size of a file.
 88. Given variables $x=30$ and $y=20$, write a Python program to print `t "30+20=50"`.
 89. Write a Python program to perform an action if a condition is true.
Given a variable name, if the value is 1, display the string "First day of a Month!" and do nothing if the value is not equal.
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90. Write a Python program to create a copy of its own source code.
 91. Write a Python program to swap two variables.
 92. Write a Python program to define a string containing special characters in various forms.
 93. Write a Python program to get the identity of an object.
 94. Write a Python program to convert a byte string to a list of integers.
 95. Write a Python program to check whether a string is numeric.
 96. Write a Python program to print the current call stack.
 97. Write a Python program to list the special variables used within the language.
 98. Write a Python program to get the system time.
- Note : The system time is important for debugging, network information, random number seeds, or something as simple as program performance.
99. Write a Python program to clear the screen or terminal.
 100. Write a Python program to get the name of the host on which the routine is running.
 101. Write a Python program to access and print a URL's content to the console.
 102. Write a Python program to get system command output.
 103. Write a Python program to extract the filename from a given path.
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104. Write a Python program to get the effective group id, effective user id, real group id, a list of supplemental group ids associated with the current process.

Note: Availability: Unix.

105. Write a Python program to get the users environment.

106. Write a Python program to divide a path on the extension separator.

107. Write a Python program to retrieve file properties.

108. Write a Python program to find a path that refers to a file or directory when you encounter a path name.

109. Write a Python program to check if a number is positive, negative or zero.

110. Write a Python program to get numbers divisible by fifteen from a list using an anonymous function.

111. Write a Python program to make file lists from current directory using a wildcard.

112. Write a Python program to remove the first item from a specified list.

113. Write a Python program to input a number, if it is not a number generate an error message.

114. Write a Python program to filter the positive numbers from a list.

115. Write a Python program to compute the product of a list of integers (without using for loop).

116. Write a Python program to print Unicode characters.

117. Write a Python program to prove that two string variables of same value point to the same memory location.

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118. Write a Python program to create a bytearray from a list.
 119. Write a Python program to display a floating number in specified numbers.
 120. Write a Python program to format a specified string to limit the number of characters to 6.
 121. Write a Python program to determine whether variable is defined or not.
 122. Write a Python program to empty a variable without destroying it.

Sample data: n=20

d = {"x":200}

Expected Output : 0

{}

123. Write a Python program to determine the largest and smallest integers, longs, floats.
 124. Write a Python program to check whether multiple variables have the same value.
 125. Write a Python program to sum all counts in a collection?
 126. Write a Python program to get the actual module object for a given object.
 127. Write a Python program to check whether an integer fits in 64 bits.
 128. Write a Python program to check whether lowercase letters exist in a string.
 129. Write a Python program to add trailing and leading zeroes to a string.
 130. Write a Python program to use double quotes to display strings.
 131. Write a Python program to split a variable length string into variables.
 132. Write a Python program to list home directories without absolute paths.
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133. Write a Python program to calculate the time runs (difference between start and current time) of a program.

134. Write a Python program to input two integers in a single line.

135. Write a Python program to print a variable without spaces between values. Sample value : x =30

Expected output : Value of x is "30"

136. Write a Python program to find files and skip directories of a given directory.

137. Write a Python program to extract a single key-value pair of a dictionary in variables.

138. Write a Python program to convert true to 1 and false to 0.

139. Write a Python program to validate an IP address.

140. Write a Python program to convert an integer to binary and keep leading zeros.

Sample data : 50

Expected output : 00001100, 0000001100

141. Write a python program to convert decimal to hexadecimal.

Sample decimal number: 30, 4

Expected output: 1e, 04

142. Write a Python program to find the operating system name, platform and platform release date.

Operating system name:

posix

Platform name:

Linux

Platform release:

4.4.0-47-generic

143. Write a Python program to determine if the python shell is executing in 32bit or 64bit mode on the operating system.

144. Write a Python program to check whether a variable is of integer or string.

145. Write a Python program to test if a variable is a list or tuple or a set.

146. Write a Python program to find the location of Python module sources.

Operating system name:

posix

Platform name:

Linux

Platform release:

4.4.0-47-generic

147. Write a Python function to check whether a number is divisible by another number. Accept two integers values form the user.

148. Write a Python function to find the maximum and minimum numbers from a sequence of numbers.

Note: Do not use built-in functions.

149. Write a Python function that takes a positive integer and returns the sum of the cube of all the positive integers smaller than the specified number.

150. Write a Python function to find a distinct pair of numbers whose product is odd from a sequence of integer values.
