Most Asked Python Coding Programs Questions & Answers

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3. Write code of Greatest Common Divisor
4. Write code of Perfect number
5. Write code to Check if two strings are Anagram or not
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1. Write a code to reverse a number

```
num = int(input("Enter the Number:"))
temp = num
reverse = 0
```

```
while num > 0:
    remainder = num % 10
    reverse = (reverse * 10) + remainder
    num = num // 10

print("The Given number is {} and Reverse is {}".format(temp, reverse))
```

2. Write the code to find the Fibonacci series upto the nth term.

```
num = int(input("Enter the Number:"))
n1, n2 = 0, 1
print("Fibonacci Series:", n1, n2, end=" ")
for i in range(2, num):
    n3 = n1 + n2
    n1 = n2
    n2 = n3
    print(n3, end=" ")

print()
```

3. Write code of Greatest Common Divisor

```
num1 = int(input("Enter First Number:"))
num2 = int(input("Enter Second Number:"))



def gcdFunction(num1, num2):
    if num1 > num2:
        small = num2
    else:
        small = num1
    for i in range(1, small+1):
        if (num1 % i == 0) and (num2 % i == 0):
            gcd = i
    print("GCD of two Number: {}".format(gcd))

gcdFunction(num1, num2)
```

4. Write code of Perfect number

```
n = int(input("Enter any number: "))
sump= 0
for i in range(1, n):
    if(n % i == 0):
        sump= sump + i
if (sump == n):
    print("The number is a Perfect number")
else:
    print("The number is not a Perfect number")
```

5. Write code to Check if two strings are Anagram or not

```
#take user input
String1 = input('Enter the 1st string :')
String2 = input('Enter the 2nd string :')
#check if length matches
if len(String1) != len(String2):
#if False
print('Strings are not anagram')
else:
#sorted function sort string by characters
String1 = sorted(String1)
String2 = sorted(String2)
#check if now strings matches
if String1 == String2:
#if True
print('Strings are anagram')
else:
print('Strings are not anagram')
```

6. Write code Check if the given string is Palindrome or not

```
#take user input
String1 = input('Enter the String :')
#initialize string and save reverse of 1st string
String2 = String1[::-1]
#check if both matches
if String1 == String2:
    print('String is palindromic')
else:
```

```
    print('Strings is not palindromic')
```

7. Write code to Calculate frequency of characters in a string

```
#take user input
String = input('Enter the string :')
#take character input
Character = input('Enter character :')
#initiaalize int variable to store frequency
frequency = 0
#use count function to count frequency of character
frequency = String.count(Character)
#count function is case sencetive
#so it print frequency of Character according to given Character
print(str(frequency) + ' is the frequency of given character')
```

8. Write code to check if two strings match where one string contains wildcard characters

```
def solve(a,b):
    n,m=len(a),len(b)
    if n==0 and m==0:
        return True
    if n > 1 and a[0] == '*' and m == 0:
        return False
    if (n > 1 and a[0] == '?') or (n != 0 and m !=0 and a[0] == b[0]):
        return solve(a[1:],b[1:]);
    if n !=0 and a[0] == '*':
        return solve(a[1:],b) or solve(a,b[1:])
    return False

str1="Prepins*a"
str2="Prepinsta"
print("First string with wild characters :" , str1)
print("Second string without wild characters ::" , str2)
print(solve(str1,str2))
```

09. Write to code to check whether a given year is leap year or not.

```
year = int(input("Enter Year:"))
if (year%400 == 0) or (year%4==0 and year%100!=0):
```

```
print("Leap Year")
else:
print("Not a Leap Year")
```

10. Find non-repeating characters in a string

```
#take user input
String = "prepinsta"
for i in String:
    #initialize a count variable
    count = 0
    for j in String:
        #check for repeated characters
        if i == j:
            count+=1
        #if character is found more than 1 time
        #brerak the loop
        if count > 1:
            break
    #print for nonrepeating characters
    if count == 1:
        print(i,end = " ")
```

11. Write a code to replace a substring in a string.

```
string=input("Enter String :\n")
str1=input("Enter substring which has to be replaced :\n")
str2=input("Enter substring with which str1 has to be replaced :\n")
string=string.replace(str1,str2)
print("String after replacement")
print(string)
```

12. Write a code to replace each element in an array by its rank in the array

```
def changeArr(input1):

    newArray = input1.copy()
    newArray.sort()
```

```
    for i in range(len(input1)):
        for j in range(len(newArray)):
            if input1[i]==newArray[j]:
                input1[i] = j+1;
                break;

# Driver Code
arr = [100, 2, 70, 12 , 90]
changeArr(arr)
# Print the array elements
print(arr)
```

13. Write a code to find circular rotation of an array by K positions.

```
def rotateArray(arr, n, d):
    temp = []
    i = 0
    while (i < d):
        temp.append(arr[i])
        i = i + 1
    i = 0
    while (d < n):
        arr[i] = arr[d]
        i = i + 1
        d = d + 1
    arr[:] = arr[: i] + temp
    return arr
```

14. Write a code to find non-repeating elements in an array.

```
# Python 3 program to count unique elements
def count(arr, n):

  # Mark all array elements as not visited
  visited = [False for i in range(n)]

  # Traverse through array elements
  # and count frequencies
  for i in range(n):
```

```
    # Skip this element if already
    # processed
    if (visited[i] == True):
        continue

    # Count frequency
    count = 1
    for j in range(i + 1, n, 1):
        if (arr[i] == arr[j]):
            visited[j] = True
            count += 1
    if count == 1 :
        print(arr[i]);


# Driver Code
arr = [10, 30, 40, 20, 10, 20, 50, 10]
n = len(arr)
count(arr, n)
```

15. Write a code to check for the longest palindrome in an array.

```
    # Function to check if n is palindrome
    def isPalindrome(n):

        divisor = 1
        while (int(n / divisor) >= 10):
            divisor *= 10

        while (n != 0):
            leading = int(n / divisor)
            trailing = n % 10

            if (leading != trailing):
                return False

            n = int((n % divisor) / 10)

            divisor = int(divisor / 100)
```

```
    return True

# Function to find the largest palindromic element
def largestPalindrome(arr, n):
    currentMax = -1

    for i in range(0, n, 1):
        if (arr[i] > currentMax and isPalindrome(arr[i])):
            currentMax = arr[i]

    return currentMax

# Driver Code

arr = [1, 232, 5545455, 909090, 161]
n = len(arr)

# print required answer
print(largestPalindrome(arr, n))
```

16. Write a code to find the factorial of a number.

```
num = 5
output = 1
for i in range(2,num+1):
  output*=i
print(output)
```

17. Write the code to for Armstrong number

```
number = 371
num = number
digit, sum = 0, 0
length = len(str(num))
for i in range(length):
  digit = int(num%10)
  num = num/10
  sum += pow(digit,length)
if sum==number:
  print("Armstrong")
```

```
else:
  print("Not Armstrong")
```

18. Write a program to find the sum of Natural Numbers using Recursion.

```
def getSum(num):
  if num == 1:
    return 1
  return num + getSum(num-1)

num = 5
print(getSum(num))
```

19. Write code to check a String is palindrome or not?

```
# function which return reverse of a string

def isPalindrome(s):
return s == s[::-1]



# Driver code
s = "malayalam"
ans = isPalindrome(s)

if ans:
print("Yes")
else:
print("No"
```

20. Write a program for Binary to Decimal to conversion

```
num = int(input("Enter number:"))
binary_val = num
decimal_val = 0
base = 1
while num > 0:
```

```
    rem = num % 10
    decimal_val = decimal_val + rem * base
    num = num // 10
    base = base * 2

print("Binary Number is {} and Decimal Number is {}".format(binary_val, decimal_val))
```

21. Write a program to check whether a character is a vowel or consonant

```
#get user input
Char =  input()
#Check if the Char belong to set of Vowels
if (Char == 'a' or Char == 'e' or Char == 'i' or Char == 'o' or Char == 'u'):
    #if true
    print("Character is Vowel")
else:
    #if false
    print("Character is Consonant")
```

22. Write a code to find Find the ASCII value of a character

```
#user input
Char = input('Enter the character :')
#convert Char to Ascii value
Asciival = ord(Char)
#print Value
print(Asciival)
```

23. Write a code to Remove all characters from string except alphabets

```
#take user input
String1 = input('Enter the String :')
#initialize empty String
String2 = ''
for i in String1:
    #check for alphabets
    if (ord(i) >= 65 and ord(i) <= 90) or (ord(i) >= 97 and ord(i) <= 122):
        #concatenate to empty string
        String2+=i
```

```
print('Alphabets in string are :' + String2)
```

24. Write a code to Print the smallest element of the array

```
arr = [10, 89, 9, 56, 4, 80, 8]
mini = arr[0]

for i in range(len(arr)):
  if arr[i] < mini:
     mini = arr[i]

print (mini)
```

25. Write a code to Reverse the element of the array

```
def reverseList(A, start, end):
  while start < end:
    A[start], A[end] = A[end], A[start]
    start += 1
    end -= 1
# Driver function to test above function
A = [10, 20, 30, 40, 50]
reverseList(A, 0, 4)
print(A)
```

26. Write a code to Sort the element of the array

```
# List of Integers
numbers = [10, 30, 40, 20]

# Sorting list of Integers
numbers.sort()

print(numbers)
```

27. Write a code to Sort the element of the array without sort method

```
# List of Integers
numbers = [10, 30, 40, 20]
```

```
# Sorting list of Integers
numbers.sort()

print(numbers)
```

28. Write a code to Replace a Substring in a string

```
string=input("Enter String :\n")
str1=input("Enter substring which has to be replaced :\n")
str2=input("Enter substring with which str1 has to be replaced :\n")
string=string.replace(str1,str2)
print("String after replacement")
print(string)
```

29. Write a code to Remove space from a string

```
#take user input
String = "PrepInsta is fabulous"

#Use join function
String = "".join(String.split())

#print String
print("After removing spaces string is :",String)
```

30. Write a code to Count Inversion

```
def inversion(arr):
    ans = 0
    for i in range(len(arr)):
        for j in range(i + 1, len(arr)):
            if arr[j] < arr[i]:
                ans += 1
    return ans



array = [6, 3, 5, 2, 7]
print("There are", inversion(array), "possible inversion")
```

31. Write a code to find consecutive largest subsequence

```
def LongestConseqSubseq(arr, l):
    val = []
    c = 0
    for i in range(l):
        n = 1
        while arr[i] + n in arr:
            c += 1
            n += 1
        val.append(c + 1)
        c = 0
    return max(val)



array = [7, 8, 1, 5, 4, 3]

print("Longest Consecutive Subsequence :", LongestConseqSubseq(array, len(array)))
```

32. Write a code to find Fibonacci Series using Recursio8

```
#Function for nth Fibonacci number
def Fibo(n):
    if n<0:
        print("Incorrect input")
#1st Fibonacci number is 0
    elif n==0:
        return 0
#2nd Fibonacci number is 1
    elif n==1:
        return 1
    else:
    return Fibo(n-1)+Fibo(n-2)

#Main Program
print(Fibo(9))
```

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