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| **INDEX** | | | | |
| **WEEK NO.** | **PROBLEMS WITH DESCRIPTION** | | **PAGE NO.** | **SIGNATURE**  **OF THE**  **TEACHER**  **WITH DATE** |
| **1#** | **1#** | Write a program to find product of two usersupplied integers and if the product is equal to or lower than 5000 then return sum of the two numbers. |  |  |
| **2#** | Write a program to print sum of first 10 numbers. |  |
| **3#** | Write a program to Iterate the supplied list of 20 numbers by the user and print only those numbers which are divisible by 5. |  |
| **4#** | Write a program to check if the given number is a palindrome number or not. |  |
| **5#** | Write a program to calculate the cube of all numbers from 1 to a given number. |  |
| **2#** | **1#** | Write a Program to extract each digit from an integer in the reverse order |  |  |
| **2#** | Write a program to count the total number of digits in a number using a while loop. |  |
| **3#** | Write a program to display all prime numbers within a range. |  |
| **4#** | Write a program to use the loop to find the factorial of a given number. |  |
| **5#** | Write a program to find the sum of digits of a supplied integer. |  |
| **3#** | **1#** | Write a program to print the following pattern using the for loop:  5 4 3 2 1  4 3 2 1  3 2 1  2 1  1 |  |  |
| **2#** | Write a program to print the following pattern using for loop:  \*  \* \*  \* \* \*  \* \* \* \*  \* \* \* \* \*  \* \* \* \*  \* \* \*  \* \*  \* |  |
| **3#** | Write a program to print characters from a string which are present at an even index numbers. |  |
| **4#** | Write a program to accept a string from the user and display characters that are present at an even index number. |  |
| **5#** | Write a program to remove characters from a string starting from n to last and return a new string. Example: remove\_chars("aligarh", 3) so output must be al. |  |
| **4#** | **1#** | Write a program to create function cal\_sum\_sub() such that it can accept two variables and calculate addition and subtraction. Also, it must return both addition and subtraction in a single return call. |  |  |
| **2#** | Write a function to return True if the first and last number of a given list is same. If numbers are different then return False |  |
| **3#** | Given a list of numbers. Write a program to turn every item of a list into its square. |  |
| **4#** | Given a two Python list. Write a program to iterate both lists simultaneously and display items from list 1 in original order and items from list 2 in reverse order. |  |
| **5#** | Write a program to count the number of occurrences of item 50 from below tuple tp1: tp1= (50, 10, 60, 70, 50) |  |
| **5#** | **1#** | Write a program to generate 6 digit random secure OTP. |  |  |
| **2#** | Write a program to pick a random character from a given String supplied by the user. |  |
| **3#** | Write a program to generate a random Password which meets the following conditions  a) Password length must be 10 characters long.  b) It must contain at least 2 upper case letters, 1 digit, and 1 special symbol. |  |
| **4#** | Given a two list of numbers, write a program to create a new list such that the new list should contain odd numbers from the first list and even numbers from the second list. |  |
| **5#** | Write a program to create a numpy array and return array of odd rows and even columns from the numpy array. |  |
| **6#** | Write a program create a numpy array and sort as per below cases:  a) Case 1: Sort array by the second row.  b) Case 2: Sort the array by the second column. |  |
| **6#** | **1#** | Write a Python program that inputs two tuples and creates a third that contains all elements of the first followed by all elements of the second. (You may use other data types such as lists etc. to make your program work) |  |  |
| **2#** | Write a Python program to create a Python dictionary (the dictionary type). Add three names and their phone numbers in the dictionary. The names should act as a keys and phones as their values. Then ask the user a name and print its corresponding phone number. |  |
| **3#** | Write a Python program having a void function that receives a 4-digit number and calculates the sum of squares of first 2 digits’ number and last two digits’ number, e.g. if 1233 is passed as argument then function should calculate 12^2 + 33^2 . |  |
| **4#** | Write a program that inputs a main string and then creates an encrypted string by embedding a short symbol-based string after each character. The program should also be able to produce the decrypted string from encrypted string. |  |
| **5#** | Write a program to get roll numbers, names and marks of the students of a class (get from user) and store these details in a file called “Marks.data” |  |
| **6#** | Write a program to accept a string and display the following: a) Number of uppercase characters  b) Numbers of lowercase characters  c) Total number of alphabets  d) Number of digits |  |