

1. Create a console application for an employee management firm. Please find the description below:

- Create a class employee which has capability to add employees.
- Read from employees
- Update employees
- You should use mysql as the database.
- Employees details should be as follows:
 - Employee Id
 - Email
 - Name
 - Phone
 - Pf id
 - Date of joining
 - Date of birth
 - Department
- Once an employee is created. Update employees with their phone numbers. Fields- pf_id, emp_id and emails should be unique.
- Apply validations for emp_id. It should be unique and a number.
- Apply validation for email. It should be a valid email address.
- Apply validation on the phone number as it should be of at least 10 digits and a number.
- Get all the employees having their year of joining as 2021 and write all the employees into the csv file.

2. Create a python script which reads from a csv file and inserts multiple employees data in the database at once.

3. Create a script in python and read from the console to create a list of dict for a list of hospitals.

eg : `[{'hospital_name': 'yashoda', 'address': 'test'}]`

Use **pickle** concept and write it to the file and create a function to read from the pickle object and use the object again to write it into a csv file.

4. Write a function that takes in a non empty array of distinct integers and an integer representing a target sum. If any two numbers in the input array sum up to the target sum, the function should return them in an array, in any order. If no two numbers sum up to target sum, the function should return an empty array.

Note that the target sum has to be obtained by summing two diff integers in the array; you can't add a single integer to itself in order to obtain the target sum.

You can assume that there will be at most one pair of numbers summing up to the target sum.

Array = [3, 5, -4, 8, 11, 1, -1, 6]

Targetsum = 10

Sample output

[-1,11]

5. Find all of the numbers from 1–1000 that are divisible by 8 using list comprehension.

6. Count the number of spaces in a string using list comprehension. Eg string : "my name is Khan".

7. Remove all the vowels from a string using list comprehension.

8. "A [Python](#) list comprehension consists of brackets containing the expression, which is executed for each element along with the for loop to iterate over each element in the"

Find all the words in the string having length less than 4 letters using list comprehension.

9. words = ['data', 'science', 'machine', 'learning']

Using dict comprehension create a dict having list items and their length as value.

Example : {'data': 4}

10. Write a function that takes in a non empty array of integers that are sorted in ascending order and returns a new array of same length with the square of original integers also sorted in ascending order.

Sample input : [1,3,5,6]

Sample output : [1,4,9,25, 36]

11. You are given a list of integers and an integer. Write a function that moves all instances of that integer in the list to the end of the list and returns the list.

Sample input : [2,1,2,2,2,3,4,5]

toMove = 2

Sample output : [1,3,4,2,2,2,2,2]