# Part(a)

Create a class **teacher** which stores the following information.

1: Name (string)

2: Address (string)

3: Contact Info (string)

4: email address (string)

5: institution (string)

6: department (string)

7: type [permanent/visiting] (char)

8: designation [Lecturer, Assistant Professor, Associate Professor, professor] (string)

9: allocated courses [it should be an array of string which can store the names of at-least 3 subjects]

10: credit hours [an array of int which stores the credit hours against the allocated courses e.g., PF is 4 credit hours course]

11: credit hours per week [do not prompt the user to enter credit hours per week rather calculate this from credit hours array]. This should be used to calculate the salary of visiting faculty members.

12: monthly salary [do not prompt the user to enter monthly salary, calculate it by using the criteria given below]

13: experience [value should be in the range of 0-4] (int)

14: publications (int)

15: qualification [Masters, doctorate, post-doctorate] (string)

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## Part(b)

Create setter and constant getter functions for each data member. Also create a function **showData.** This function should display the data of calling object on console.

**Part(c)**

Use the following criteria to calculate the salary. Provide the implementation inside "calculateSalary" function.

## Visiting Faculty

* Lecturer (2000 per hour)
* Assistant Professor (4000 per hour)
* Associate Professor (7000 per hour)
* Professor (9000 per hour)

## Permanent Faculty

* Lecturer [100K]
* Assistant Professor [175K]
* Associate Professor [250K] • Professor [325k]

Remember these are basic salaries for the faculty members having no experience. Increase the salaries as per the experience and publications. The increment should be 5%, 10%, 15%, 20% of the basic salaries for the faculty members having 1,2,3, and 4 years of experience respectively and 8K against each publication.

## Part(d)

Create a function **updateRecord**. This function should display the following menu.

* Enter 1 to update qualification
* Enter 2 to update contact
* Enter 3 to update institution

Get the choice from user. if the user provides valid choice, then update the information of the calling object.

## Part(e)

Create a function show data which display all the data of calling object. Call the getter functions to display the data except for allocated courses and credit hours. You can directly access the data of these two arrays in this function.

## Part(f)

Inside main function, create an array of objects. Minimum size of this array should be 5. Read the data from text file and call the setter functions. Calculate the salary of each object of the array. Now call the updateRecord function for second and third objects of the array and update their info. Display the data of each object on console and save the salaries of each teacher in a file.

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