



School of Engineering

CE523 – Python Programming II

CIE-1

Duration: 90 minutes

Date: 16-08-2019

Max Marks:20

Instructions to Candidates:

1. Read the context, problem description, requirements and other details carefully and implement the solution.
2. Ensure that all the constructors are public and DO NOT change the prototype of the constructor and the methods.
3. The coding standards are mandatory wherever applicable, **Including Comments**
4. Modify the .py as per the requirements provided to you in this question paper.

Guidelines:

1. This assessment is intended to test the hands-on skills related to Programming using python.
2. You must use IDLE for implementing

NOTE 1: DO NOT RENAME any .py FILES.

NOTE2: NOT adhering to the above instructions and guidelines may lead to drastic reduction in your score even if the code is executing without any errors

WISH YOU ALL THE BEST





Problem Description:

Employee Management System:

iNext Ltd, a company with more than 50000 Student, that provides solutions to large number of services to different countries. It uses a software product to maintain their employee's information.

Each requirement carries a mentioned mark.

REQUIREMENTS:

| Modify .PY file to reflect the following requirements | | | | | | | | | | | | | |
|---|---|-------------------|--|-----------|-----------------------------|-----------------|--|-----------------|---|----------------|-------------------|---|---|
| Requirement ID | Requirement Description | Max Marks | Expected UI Screen | | | | | | | | | | |
| REQ_1 | Import appropriate files in Employee.py file in order to work with Permanent Employee and myconnect class. | 2 |     | | | | | | | | | | |
| REQ_2 | <p>Implement “calculatesalary” method in PermanentEmployee.py file as per below instruction.</p> <p>It calculates the allowance based on the yearsofexperience. Use below table compute the appropriate values</p> <table><tr><th>Yearsofexperience</th><th>Allowance</th></tr><tr><td>Greater than or equal to 15</td><td>20% of basicpay</td></tr><tr><td>Greater than or equal to 10 and less than 15</td><td>10% of basicpay</td></tr><tr><td>Greater than or equal to 5 and less than 10</td><td>5% of basicpay</td></tr><tr><td>Less than 5 years</td><td>0</td></tr></table> <p>Note: Method should return the calculated salary.</p> | Yearsofexperience | | Allowance | Greater than or equal to 15 | 20% of basicpay | Greater than or equal to 10 and less than 15 | 10% of basicpay | Greater than or equal to 5 and less than 10 | 5% of basicpay | Less than 5 years | 0 | 2 |
| Yearsofexperience | Allowance | | | | | | | | | | | | |
| Greater than or equal to 15 | 20% of basicpay | | | | | | | | | | | | |
| Greater than or equal to 10 and less than 15 | 10% of basicpay | | | | | | | | | | | | |
| Greater than or equal to 5 and less than 10 | 5% of basicpay | | | | | | | | | | | | |
| Less than 5 years | 0 | | | | | | | | | | | | |
| REQ_3 | Create and implement static method in Employee.py file to add notes to the notes.txt file. | 2 | | | | | | | | | | | |
| REQ_4 | In connect.py file, write a code to create and connect to a database named “emp.db” | 2 | | | | | | | | | | | |
| REQ_5 | In connect.py file, write a code to create a table named emp with appropriate columns and data types. Also, handle the run time errors if table already exists in database. | 2 | | | | | | | | | | | |
| REQ_6 | Write a code to save the employee details entered by user into the emp table. | 4 | | | | | | | | | | | |
| REQ_7 | Write a code to display details of those emails whose id is entered by user. | 2 | | | | | | | | | | | |
| REQ_8 | Create a new file Validation.py with the class named validation and containing a method named "validateemail" and “validatetemobile”. Also, utilise the same in employee.py file un order to validate email and mobile number entered by user. | 4 | | | | | | | | | | | |