



**NATIONAL UNIVERSITY OF MODERN LANGUAGES**  
**Faculty of Computer Science**  
**BSCS 37- II, Afternoon-Final Term Examination – Spring 2021**

**Paper: Object Oriented Programming**  
**Time Allowed: 2 hours**

**Total Marks : 30**

**Instructions:**

- Attempt all questions.

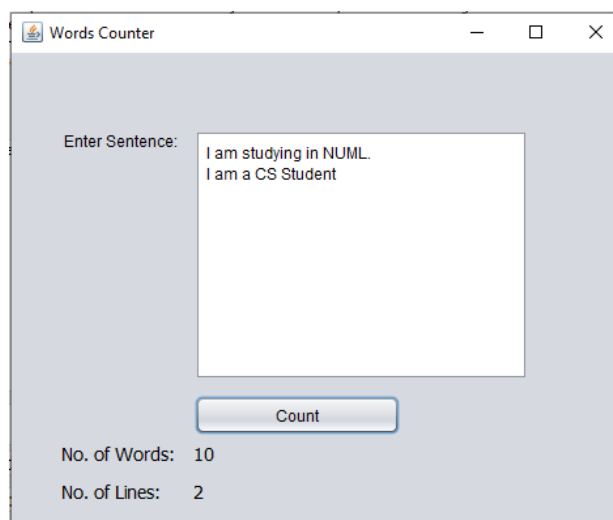
**Q#1**

- a) Explain how does Polymorphism make working easy in a program?
- b) Create an interface called **Employee**. This interface contains the following abstract methods: `void setName(String myName)`, `void setAge(int myAge)`; and `double Salary(void)`. Also write two classes called **SalariedEmp** and **HourlyEmp** that implements the above interface. The **SalariedEmp** class has variables `basic_pay` and `no_of_days` to calculate monthly salary. Whereas, the **HourlyEmp** class has variables `no_of_hrs` and `rate_per_hrs` to calculate salary. Write code only of required functionality.

**Marks (4+6= 10)**

**Q#2**

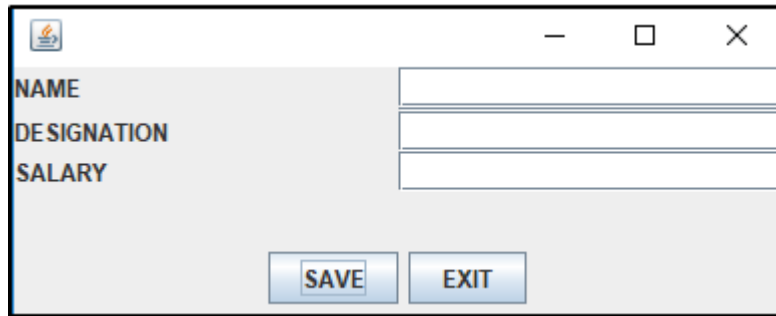
Write complete java code to design given GUI using appropriate layout manager, assume JFrame size is 300X300. Add JLabels, JTextArea and JButton accordingly. No need to write action listener code, just write the functionality of action performed on button **btnCount** which shows total No.of Words and No.of Lines exists in paragraph typed in JTextArea.



**Marks 10**

### Q #3

- a) Consider a database name “test” contains a table “tblEmployee”. tblEmployee has 4 columns EMP\_ID, EMP\_NAME, EMP\_DESG and , EMP\_SAL. Whereas given JFrame “frmEmployee” contains three JTextFields “txtENAME”, “txtEDES” and “txtESAL”. Write functionality of action performed of button “Save” drawn on frmEmployee to make sure record is saved into the database.



- b) Suppose every semester different courses are offered to the students which are selected by the students through a form. To make the courses field dynamic you are required to write code to load course's JComboBox from database table courses containing column name course\_name. Write only necessary code to load JComboBox.

**Marks (5+5= 10)**