SARDAR PATEL UNIVERSITY
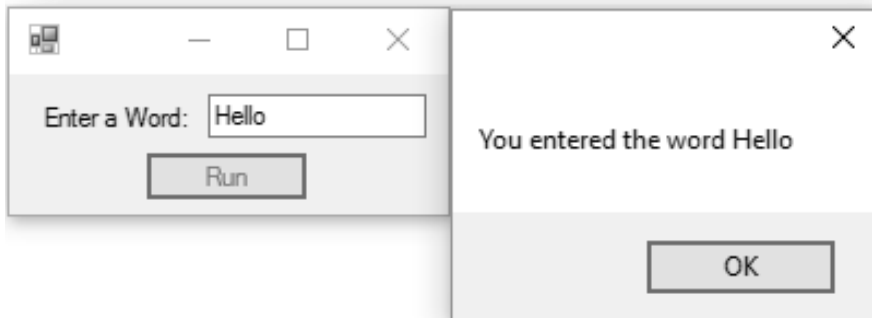### BCA Semester-IV
Visual Programming Lab - US04CBCA22
Practical List

**[Note: All programs write in Journal book.]**

1. Design a VB.NET form to show Welcome Message though Label at form load time.
2. Design a VB.NET Form accept any text from user into the TextBox and show in msgbox().

3. Accept two numbers using Inputbox on the click of the button and display SUM of these two numbers using Msgbox.
4. Design a form as shown below and perform the operations on the numbers entered.

5. Design a VB.NET Form to accept number from user into the TextBox. Calculate the square root of that number also convert the entered number into binary number and display result into the Message Box.
6. Design a form as shown below and display the array in ascending and descending order.
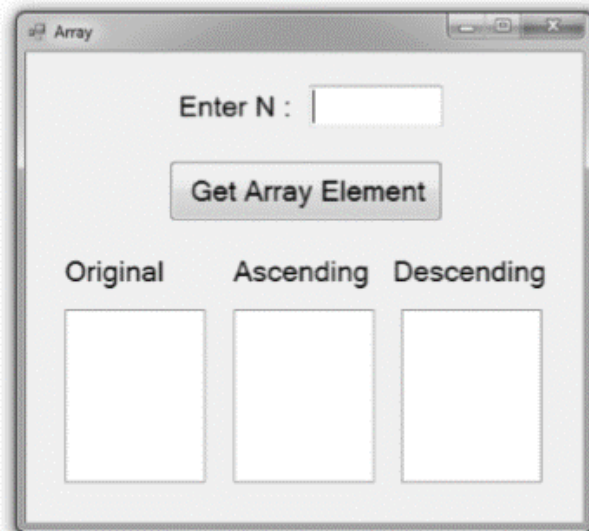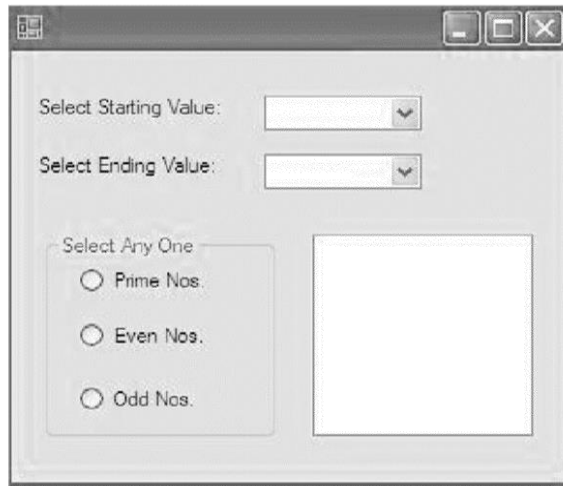

7. Design a VB form as shown below to read the student data and generate the mark-sheet data. Clear the data when user clicks the "Clear" button. When user click on "Exit" then end the execution.

Student Marksheet

Roll No : _____   Student Name : _____

Marks Scored

Sub 1   Sub 2   Sub 3   Sub 4   Sub 5   Sub 6

_____   _____   _____   _____   _____   _____

Result

Total   Per   Grade

_____   _____   _____   Generate   Exit
                                      Clear

8. Design a Vb.net form to pick a date from DateTimePicker Control and display day, month and year in separate text boxes.
9. Design the digital watch using Timer Control.
10. Design the following calculator.

11. Create form that has text boxes for Email Id & access code.
   ▪ Accept only valid Email Id. An email is valid when
   ▪ It contains only one @ and at least one. (Dot) after @.
   ▪ It [a-z, 0-9, (dot) and _ (underscore)] characters only.
   ▪ Example: john.mathew@abccorp.com (valid) john.mathew@abccorp (invalid)
   ▪ Valid access code must have three characters & first character should be numeric.
   ▪ Example: AB (invalid), 1ty (invalid), abc (valid)
   ▪ Display appropriate message for invalid entries.
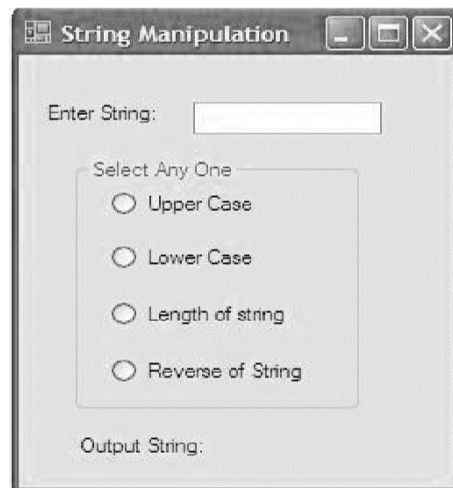   ▪ Use ErrorProvider control

12. Design the following form.

From the given combo boxes user has to select Starting value and ending value. When user clicks on "Prime Nos" radio button then the prime nos. between the given ranges is displayed in the list box. Same as for other options.
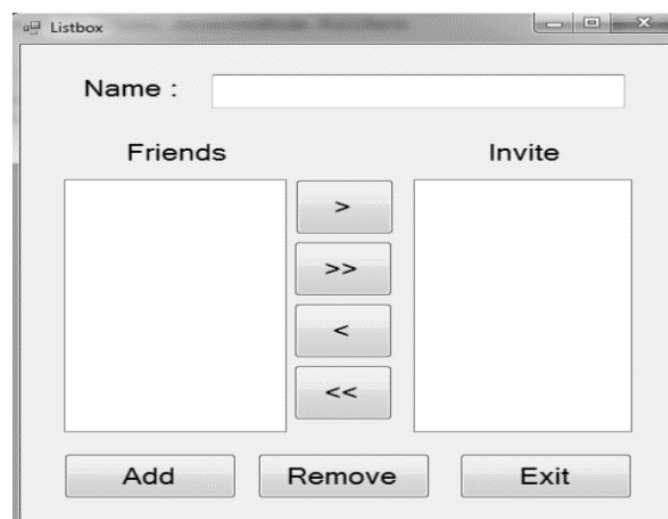
13. Design the following form:

When user clicks on "Upper Case" radio button then inputted string will be displayed in Upper case in Output string label. Same as for other options.

14. Develop the following form.

When user clicks add button add the name in list box (Friend), using list box (Friend) enter selected name in another list box (Invite), also remove-selected name from list box.

15. Write a Vb.net program to design the following form, allow the user to select radio buttons from Gender and Age Panel. After Selection appropriate CheckBox from Right Panel should be selected automatically. Display appropriate message into the MessageBox by clicking on Ok button.

16. Write a Vb.net program to design the following form, select the question number from combo box that question will be displayed into textbox and the options for that question will be displayed on four radio buttons, select option and click on submit button result should be displayed in another textbox.

17. Design following form. When user enter a name and three test scores. When Add button is clicked it will add the information to the listview.

18. Design following form. When user clicks on Submit button then all information will be printed in following Textbox. When user clicks on Clear then all textboxes will clear. When user clicks on Exit button then application will be closed.

19. Design following Form which shows use of Picturebox.

20. Design following Form which shows use of Horizontal and Vertical Scroll Bar.

**21.** Design following Form which shows use of Checked Listbox.

22. Design following Form which shows use of Treeview control:
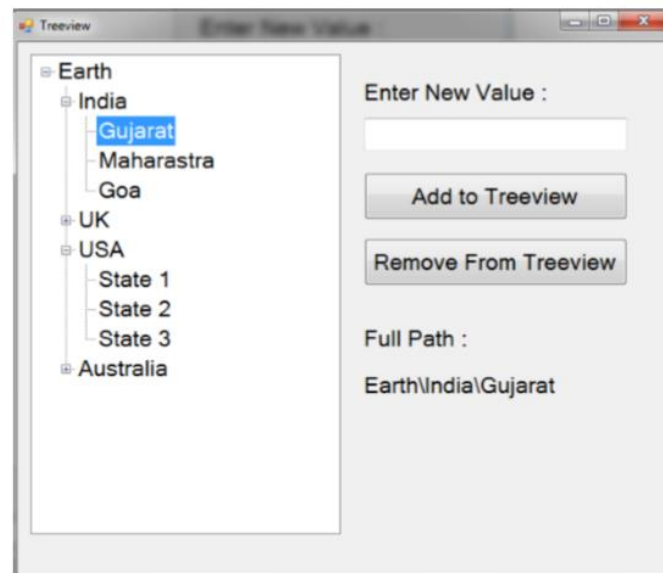
23. Create MDI form that has and create following menu.
- File Menu
  - New, Open, Save, Exit
- Edit Menu
  - Cut, Copy, Paste, Date time, Find and Replace
- Format Menu
  - Font, Bold, Italic, Underline, Color (submenu contains 2 options: Back Color, Text Color), Upper Case, Lower Case
- View Menu
  - Zoom in, Zoom out
- Help Menu
  - About notepad show in msgbox()

On selection of specific menu item, perform the respective activity/show message.
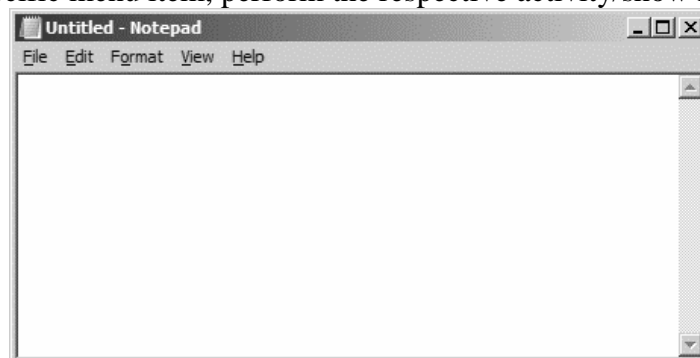
24. Design the Login Form as shown below in VB.NET.
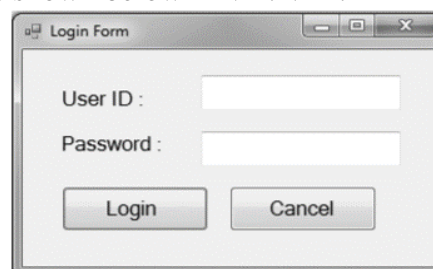
- Using Database connectivity.
- Compare string values with case sensitive comparison.
- For invalid values ask again only for three times after that close application automatically.

25. Design the Form as shown below

Create the form that shows the basic operations on Student database like insert, delete and update. To perform this application using ADO.Net Database connectivity.

26. Design the form as shown below
The navigation operation on database

27. Design the form as shown below

28. Design the form as shown below

29. Design the form as shown below. Using Two Tables

30. Design the form as shown below

Employee report in Microsoft Report viewer.

31. Design the form Student Mark sheet base on student table.
- **Table:** Student
  Fields: student roll no, student name, five subject marks, Total, Percentage, GPA, Grade
- **Condition:**
  - Maximum marks of each subject is 100 marks.
  - Passing (Subject Clear) criteria is 40 Marks.
  - The criteria for grade calculation:
    - If student fail in any subject means student Not Clear that semester
    - If student pass in all subject means student clear that semester, then check for the following condition.
      - GPA= percentage/10
      - If GPA >=9% then grade 'O'
      - If GPA < 7% and >=6% then grade 'B'
      - If GPA < 6% and >=5% then grade 'C'
      - If GPA < 5% and >=4% then grade 'D'
- Perform the Insert, update, deleted operations.
- Perform the navigation operation like First, Last, Next, Previous.
- Show in DataGridView that shows the Student recodes.
- The result should be display with following Report format:

<div align="center">
Sardar Patel University, Anand
B.C.A Semester III Student Result 2019-20
</div>

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Roll No	NAME	M1	M2	M3	M4	M5	TOTAL	%	GPA	Grade
1	. . . . . .	..	..	..	..	..	……	..	..	….
2	. . . . . .	..	..	..	..	..	……	..	..	….

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Total students No: ____   Total Clear Students No: ____   Total NC students No: ____

32. Atmiya E-cycle Co. Company has been develop Employee Management System. Here Requirements
Database Dictionary:

Table: User Login

   Fields: User id, Username, Password (User id auto generate & Username Primary Key)

Table: Employee Information

   Fields: Employee No, Employee Name, Address, City, State, Country, Pin code, Mobile No, Gender, Birth Date, Department, Joining Date, Basic Salary. (Employee No Primary Key and auto generate)

Table: Employee Attendance

   Fields: Attendance id, Employee No, Month, Year, Total Working Days, Present Day, Absent Day (Attendance id -Primary Key and auto generate, Employee No- Foreign key)

Table: Employee Salary

   Fields: Receipt No, Date, Employee No, Attendance id, Basic Salary, DA, HRA, TA, Gross Salary, PF, Net Salary (Receipt No -Primary Key and auto generate, Attendance id, Employee No - Foreign key)

Forms:

- **Login Form:** Show welcome message if user supplies both username and password as match in database. If user successfully logs in to system, the MDIParent form will be opened. For invalid values ask again only for three times after that close application. Add Button for Forgot password navigating to Forgot Password Form.
- **Forgot Password Form:** Enter Username and get password in message box.
- This application contains one MDIParent Form, MDIChild forms and create appropriate menu in MDIParent Form.
  - **New Employee Form:**
    - In this Form Enter Employee Details and store in database.
    - Perform the insert operations. Use Employee Information table.
    - Show in DataGridView that shows the Employee all records.
  - **Update Employee Details Form:**
    - In this Form Enter Employee Update Employee Details and store in database. Perform the update, deleted operations.
    - Perform the navigation operation like First, Last, Next, Previous
    - Show in DataGridView that shows the Employee all recodes. Use Employee Information table.
  - **Employee attendance form:**
    Total Working Days= Present Day + Absent Day
    - Perform the insert, update, deleted operations. Use Employee Attendance table and Employee Information table.
    - Perform the navigation operation like First, Last, Next, Previous
    - Show in DataGridView that shows the Employee Attendance all recodes
  - **Employee Salary form:**
    Per day Salary = $\dfrac{\text{Basic Salary on Employee Information table}}{\text{Total Working Days of month}}$

    Basic Salary= Per day Salary * Present day
    DA= Basic Salary * 20%
    HRA= Basic Salary * 25%
    TA=2000
    Gross Salary= Basic Salary +DA+HRA+TA
    Net Salary=Gross salary - (PF)
    - Perform the insert, update, deleted operations. Use Employee Attendance table, Employee Information table and Employee Salary table.
    - Display the navigation between records like First, Last, Next, Previous.
    - Show in datagridview that shows the Employee Attendance all recodes
  - **Report Form:**
    - Create report for all details of employees.
    - Create Report for salary Slip monthly.
    - Create Report for Enter Employee No and generate employee annual Report
    - Create report to show employees categorized according to their Department of work.