C# and .Net Framework

Assignment – 1

Questions

1. i) Write a C# program using a float literal to store a temperature value (e.g., 36.6). Check if the temperature is above 37.0. If yes, display "Fever", otherwise "Normal".

ii) Declare an int literal to store a person’s age (e.g., 18). Check whether the person is eligible to vote (age >= 18). Print "Eligible to Vote" or "Not Eligible".

iii) Use a char literal (e.g., 'M' or 'F') to represent gender. If the character is 'M', print "Male", if 'F', print "Female", else print "Other".

iv) Use double literals for price and discount percentage. For example, price = 1000.0, discount = 10.0%. Calculate the final price and display it.

v) Use a bool literal to represent login success (e.g., true). If true, display "Login successful", else "Access denied".

vi) Declare the following literals:

* int as age = 25
* float as temperature = 98.6f
* char as grade = 'A'
* bool as isPassed = true

Write a program to print each value along with its data type using GetType().

2. Build a calculator app for kids to learn math. Declare two int literals: a = 10, b = 5.  
Calculate and print:

* Total apples
* Difference of pencils
* Total pages when 10 pages are copied 5 times
* Divide 10 chocolates among 5 kids
* Leftover candies after equal distribution

3. Write a program for a game where players’ scores are compared.

Player A scored 20, Player B scored 15.  
Use relational operators to:

* Check if Player A scored more than B
* Check if scores are equal
* Check if any player failed to beat the other (use <= or >=)

4. In a login system, access is granted only if both the username and password are valid.

Use logical operators to:

* Check if login is successful using &&
* Check if at least one condition is true using ||
* Use ! to display opposite values

Print: "Access Granted" or "Access Denied"

5. A student starts with 50 points in a quiz. Points are updated based on answers.

* Add 10 for a correct answer
* Deduct 5 for a wrong answer
* Double the score for a bonus round
* Reduce score to 1/5th during penalty

Print the score after each update.

6. creating a system for an election booth. It needs to check whether people are eligible to vote based on age.

Write a program that:

* Asks the user to enter their age.
* If age is 18 or more, print "Eligible to Vote".
* Otherwise, print "Not Eligible".

Use a loop to repeat this for **5 people**.

7. In an ATM system where users can try up to 3 times to enter the correct PIN.

**Question:**

* PIN is set as 1234.
* If entered PIN is correct, print "Access Granted".
* If wrong, allow up to 3 tries. After that, print "Card Blocked".

8. A school app needs to generate multiplication tables for students.

* Ask user to enter a number.
* Print its multiplication table up to 10.

**Bonus:** Ask user if they want to try another number (Y/N).

9. Create a system to calculate electricity bills based on units consumed.

 Take units as input.

 Use branching to calculate bill:

* 0–100 units: ₹2/unit
* 101–200 units: ₹3/unit
* 201 and above: ₹5/unit

 Show total bill.

10. A school wants to analyze student scores for 5 subjects.

 Take an array of 5 subject marks.

 Calculate and return the average.

 In Main(), display whether the student **Passed** (avg ≥ 40) or **Failed**.

11. A company is validating names before printing ID cards.

 Name should not contain digits or special characters.

 In Main(), read name input and use the method to check validity.