ACTIVITY 1.

```
internal class Program

    {

        static void Main(string[] args)

        {
            Console.Write("First name: ");
            string firstName = Console.ReadLine();

            Console.Write("Last name: ");
            string lastName = Console.ReadLine();

            if (!string.IsNullOrWhiteSpace(firstName) && !string.IsNullOrWhiName))
            {
                Console.WriteLine($"Your full name is {firstName} {lastName}");
            }
            else
            {
                Console.WriteLine("Error. Please try again");
            }
```

```
        }
    }

}
```

Activity 2.

```
public static class Program

{

    public static void Main()

    {
        Console.Write("Enter your age in yers: ");
        string input = Console.ReadLine();

        if (int.TryParse(input, out int age))
        {
            if (age >= 1 && age <= 120)
            {

                int ageInMonths = age * 12;
                Console.WriteLine($"Your age {ageInMonths} months old. ");
```

```
            }
            else
            {
                Console.WriteLine("Error: Age must be between 1 and 120.");
            }
        }
        else
        {
            Console.WriteLine("Invalid input. Please enter a valid number.");
        }
    }
```

Activity 3.

```
public static class Program
{
    public static void Main()
    {
        float price;
```

```
            int quantity;

            Console.Write("Enter the price of the item: ");
            string priceInput = Console.ReadLine();
            bool isValidPrice = float.TryParse(priceInput, out price);

            if (!isValidPrice || price <= 0)
            {
                Console.WriteLine("Invalid input. Price must be a positive number.");
                return;
            }

            Console.Write("Enter the quantity: ");
            string quantityInput = Console.ReadLine();
            bool isValidQuantity = int.TryParse(quantityInput, out quantity);

            if (!isValidQuantity || quantity <= 0)
            {
                Console.WriteLine("Invalid input. Quantity must be a positive whole
number.");
                return;
            }

            float total = price * quantity;
            Console.WriteLine($"Total cost: Php {total:F2}");
```

```
        }
    }
}
```

Activity 4.

```
public static class Program

{

    public static void Main()

    {
        Console.Write("Enter temperature in Celsius (between -100 and 100): ");
        if (double.TryParse(Console.ReadLine(), out double celsius) && celsius >= -100 && celsius <= 100)

        {
            double fahrenheit = (celsius * 9 / 5) + 32;
            Console.WriteLine($"Temperature in Fahrenheit: {fahrenheit:F1} °F");

        }
        else
        {
            Console.WriteLine("Error: Please enter a valid number between -100 and 100.");
```

```
        }

    }


}
```

Activity 5.

```
public static class Program
{
    public static void Main()
    {
        string name = "John";
        int age = 25;
        float height = 5.9f;

        Console.WriteLine("Name: " + name + ", Age: " + age + ", Height: " + height);




    }
}
```

```
    }
}
```

Activity 6.

```
public static class Program

{

    public static void Main()

    {
        Console.Write("Enter a grade: ");
        if (int.TryParse(Console.ReadLine(), out int grade) && grade >= 0 && grade <=
100)
        {
            if (grade >= 90 && grade <= 100)
            {
                Console.WriteLine("Your grade is: A");
            }
            else if (grade >= 80 && grade <= 89)
            {
                Console.WriteLine("Your grade is: B");
```

```
        }
        else if (grade >= 70 && grade <= 79)
        {
            Console.WriteLine("Your grade is: C");
        }
        else if (grade >= 60 && grade <= 69)
        {
            Console.WriteLine("Your grade is: D");
        }
        else if (grade < 60)
        {
            Console.WriteLine("Your grade is: F");



        }
        else
        {

            Console.WriteLine("Invalid Grade. ");


        }
    }
}
```

Activity 7.

```
public static class Program


{
    public static void Main(string[] args)
    {
        Console.Write("Enter first number: ");
        double num1 = Convert.ToDouble(Console.ReadLine());

        Console.Write("Enter second number: ");
        double num2 = Convert.ToDouble(Console.ReadLine());

        Console.Write("Enter operation (+, -, *, /): ");
        char operation = Console.ReadKey().KeyChar;
        Console.WriteLine();

        double result = 0;

        switch (operation)
        {
            case '+':
                result = num1 + num2;
```

```
            break;
        case '-':
            result = num1 - num2;
            break;
        case '*':
            result = num1 * num2;
            break;
        case '/':
            if (num2 != 0)
            {
                result = num1 / num2;
            }
            else
            {
                Console.WriteLine("Error: Division by zero.");
                return;
            }
            break;
        default:
            Console.WriteLine("Error: Invalid operation.");
            return;
    }

    Console.WriteLine($"Result: {result}");
```

```
    }
}
```

Activity 8:

```
public static class Program
{
    public static void Main()
    {
        Console.Write("Enter a numericvalue: ");
        string input = Console.ReadLine();

        if (int.TryParse(input, out int NumericValue))
        {
            int result = NumericValue + 10;
            Console.WriteLine($"Result after adding 10: {result} result");
        }
        else
        {
            Console.WriteLine("Error: Please enter a numeric valid value");
        }
```

```
    }

}
```

Activity 9.

```
public static void Main()
    {
        Console.Write("Enter an integer: ");
        string input = Console.ReadLine();

        if (int.TryParse(input, out int number))
        {
            if (number % 2 == 0)
            {
                Console.WriteLine("The number is even.");
            }
            else
            {
                Console.WriteLine("The number is odd.");
            }

        }
        else
        {
```

```
                Console.WriteLine("Invalid input. Please enter an integer.");



            }

        }

}
```

Activity10.

```
public static class Program
{
    public static void Main()


    {
        Console.Write("Enter name: ");
        string name = Console.ReadLine();

        Console.Write("Enter age: ");
        int age = int.TryParse(Console.ReadLine(), out int a) ? a : -1;

        Console.Write("Enter email: ");
```

```
        string email = Console.ReadLine();

        if (string.IsNullOrEmpty(name))
            Console.WriteLine("Name required");
        else if (age < 1 || age > 120)
            Console.WriteLine("Invalid age");
        else if (!email.Contains("@"))
            Console.WriteLine("Invalid email");
        else
            Console.WriteLine("All fields are valid");
    }
}
```

Activity 11.

```
public static class Program
{
    public static void Main()
    {
        string correctPin = "1234";
        int attempts = 3;

        while (attempts > 0)

        {
            Console.WriteLine("Enter the 4 - digit PIN: ");
```

```
            string input = Console.ReadLine();

            if (input == correctPin)

            {
                Console.WriteLine("Acces granted.");
                return;

            }
            else
            {
                attempts--;
                Console.WriteLine($"Incorrect PIN. Attempts remaining: {attempts}");
            }

        }

        Console.WriteLine("Access denied.");

    }

}
```

Activity 12.

```
public static class Program
{
    public static void Main()

    {
        Console.Write("Enter an integer: ");
        string input = Console.ReadLine();

        if (int.TryParse(input, out int number))
        {
            if (number % 2 == 0)
            {
                Console.WriteLine("The number is even.");
            }
            else
            {
                Console.WriteLine("The number is odd.");
            }

        }
        else
        {
            Console.WriteLine("Even number or Odd number.");
```

```
        }
    }
```

Activity 13.

```
public static class Program
{
    public static void Main()

    {
        string name = "jHON";
        string changeCase = string.IsNullOrEmpty(name) ? "" : char.ToUpper(name[0]) + name.Substring(1).ToLower();
        Console.WriteLine(changeCase);

    }

}
```

Activity 14.

```
public static class Program
{
    public static void Main()
    {
        Console.Write("Enter your age: ");
        string input = Console.ReadLine();

        if (int.TryParse(input, out int age))
```

```
{
    if (age >= 0 && age <= 12)
    {
        Console.WriteLine("Your classify user is: Child");
    }
    else if (age >= 13 && age <= 19)
    {
        Console.WriteLine("Your classify user is: Teen");
    }
    else if (age >= 20 && age <= 59)
    {
        Console.WriteLine("Your classify user is: Adult");
    }
    else if (age >= 60 && age <= 130)
    {
        Console.WriteLine("Your classify user is: Senior");
    }
    else
    {
        Console.WriteLine($"You are classified: {(age)} age.");
    }

}
```

```
    }

}
```

Activity 15.

```
public static class Program
{
    public static void Main()

    {
        Console.Write("Enter a grade: ");
        if (int.TryParse(Console.ReadLine(), out int grade) && grade >= 0 && grade <=
100)
        {
            if (grade >= 90 && grade <= 100)
            {
                Console.WriteLine("90 - 100: A");
            }
            else if (grade >= 80 && grade <= 89)
            {
                Console.WriteLine("80 - 89: B");
            }
            else if (grade >= 70 && grade <= 79)
            {
                Console.WriteLine("70 - 79: C");
```

```
            }
            else if (grade >= 60 && grade <= 69)
            {
                Console.WriteLine("60 - 69: D");
            }
            else if (grade <= 50 && grade >= 0)
            {
                Console.WriteLine("< 60: F");


            }
            else
            {

                Console.WriteLine("Invalid Grade. ");

            }
        }
    }

}
```

Activity 16.

```
public static class Program
```

```
{
    public static void Main()

    {

        float num1, num2, result;
        string operation;

        Console.Write("Enter the first number: ");
        num1 = float.Parse(Console.ReadLine());

        Console.Write("Enter the second number: ");
        num2 = float.Parse(Console.ReadLine());

        Console.Write("Enter an operator (+, -, *, /): ");
        operation = Console.ReadLine();

        switch (operation)
        {
            case "+":
                result = num1 + num2;
                Console.WriteLine($"Result: {result}");
                break;
```

```
case "-":
    result = num1 - num2;
    Console.WriteLine($"Result: {result}");
    break;

case "*":
    result = num1 * num2;
    Console.WriteLine($"Result: {result}");
    break;

case "/":
    if (num2 != 0)
    {
        result = num1 / num2;
        Console.WriteLine($"Result: {result}");
    }
    else
    {
        Console.WriteLine("Error: Division by zero is not allowed.");
    }
    break;

default:
    Console.WriteLine("Error: Invalid operator.");
```

```
                    break;
            }
        }
}
```

Activity 17.

```
public static void Main()
    {


        Console.Write("Enter a number between 1 and 10: ");
        if (int.TryParse(Console.ReadLine(), out int number) && number >= 1 && number
<= 10)
        {
            Console.WriteLine($"\nMultiplication Table for {number}:");
            for (int i = 1; i <= 10; i++)
            {
                Console.WriteLine($"{number} x {i} = {number * i}");
            }
        }
        else
        {
            Console.WriteLine("Invalid input. Please enter an integer between 1 and 10.");
        }
    }
}
```

Activity 18.

```
public static class Program
{
    public static void Main()
    {

        Console.Write("Enter a positive integer: ");
        if (int.TryParse(Console.ReadLine(), out int num) && num > 0)
        {
            Console.WriteLine($"Countdown from {num} to 0");
            while (num >= 0)
            {
                Console.WriteLine(num);
                num--;

            }

        }
        else
        {
            Console.WriteLine("Invalid input. Please enter a positive integer.");

        }
```

Activity 19.

```
public static class Program
{
    public static void Main()
    {
        const string secretWord = "open";
        string guess;

        do
        {
            Console.Write("Guess the secret word: ");
            guess = Console.ReadLine().ToLower();

            if (guess != secretWord)
                Console.WriteLine("Try again.");

        } while (guess != secretWord);

        Console.WriteLine("Correct!");
    }
}
```

Activity 20.

```
public class PasswordValidator
{
```

```
    public static string ValidatePassword(string password)
    {
        if (password.Length < 8) return "Password must be at least 8 characters long.";

        bool hasNumber = password.Any(char.IsDigit);
        if (!hasNumber) return "Password must contain at least one number.";

        bool hasUpper = password.Any(char.IsUpper);
        if (!hasUpper) return "Password must contain at least one uppercase letter.";

        return "Valid password";
    }

    public static void Main(string[] args)
    {
        Console.Write("Enter password: ");
        string password = Console.ReadLine();
        string result = ValidatePassword(password);
        Console.WriteLine(result);
    }
}
```

Activity 21.

```
public static class Program
```

```
{
    public static void Main()
    {
        Console.Write("Enter your choice from 1-3: ");
        if (int.TryParse(Console.ReadLine(), out int choice))


        {
            switch (choice)

            {
                case 1:
                    Console.WriteLine("Hello, user!");
                    break;

                case 2:

                    Console.WriteLine("Show current date!");
                    break;

                case 3:

                    Console.WriteLine("Exiting!");
                    break;
```

```
                default:

                    Console.WriteLine("Invalid choice.");
                    break;

            }




        }
    }
}
```

Activity 22.

```
using System;

class Program
{
    static void Main()
    {
        Console.Write("Enter a word: ");
        string word = Console.ReadLine();
```

```
        Console.Write("Enter the index (starting from 0): ");
        string input = Console.ReadLine();

        if (int.TryParse(input, out int index))
        {
            if (index >= 0 && index < word.Length)
            {
                char character = word[index];
                Console.WriteLine($"Character at index {index}: {character}");
            }
            else
            {
                Console.WriteLine("Index is out of range. Please enter a valid index.");
            }
        }
        else
        {
            Console.WriteLine("Invalid input. Please enter a number for the index.");
        }
    }
}
```

Activity 23.

```
public static class Program
{
    public static void Main()
    {

        Console.Write("Enter a sentence: ");
        string sentence = Console.ReadLine();

        int uppercaseCount = 0;

        foreach (char c in sentence)
        {
            if (char.IsUpper(c))
            {
                uppercaseCount++;
            }
        }

        Console.WriteLine($"Total uppercase letters: {uppercaseCount}");
    }
}
```

Activity 24.

```
class Program
```

```
{
    static void Main()
    {
        while (true)
        {
            Console.Write("Username: ");
            if (Console.ReadLine() != "admin") continue;
            Console.Write("Password: ");
            if (Console.ReadLine() == "1234") break;
            Console.WriteLine("Try again");
        }
        Console.WriteLine("Login successful");
    }
}
```

Activity 25.

```
public static class Program
{
    public static void Main()
    {

        int total = 0;
        while (true)
        {
```

```
            Console.Write("Enter a number (or 'stop' to end): ");
            string input = Console.ReadLine();
            if (input.Equals("stop"))
            {
                break;
            }
            if (int.TryParse(input, out int num)) total += num;
        }
        Console.WriteLine($"Sum: {total}");
    }
}
```

Activity 26.

Activity 27.

```
public static class Program
{
    public static void Main()
```

```
    {
        Console.Write("Enter number of rows: ");
        int rows = int.Parse(Console.ReadLine());
        int currentNumber = 1;

        for (int i = 1; i <= rows; i++)
        {
            for (int j = 1; j <= i; j++)
            {
                Console.Write(currentNumber++ + " ");
            }
            Console.WriteLine();
        }
    }
}
```

Activity 28.

```
public static class Program
{
    public static void Main()


    {
        Console.Write("Enter a word: ");
```

```
        string word = Console.ReadLine();


        Console.Write("Reversed: ");
        for (int i = word.Length - 1; i >= 0; i--)
        {
            Console.Write(word[i]);
        }
        Console.WriteLine();
    }
}
```

Activity 28.

```
public static class Program

{

    public static void Main()
    {

        Console.Write("Enter start: ");
        int start = int.Parse(Console.ReadLine());
        Console.Write("Enter end: ");
        int end = int.Parse(Console.ReadLine());
```

```
        if (start >= end)
        {
            Console.WriteLine("Invalid range (start must be < end)");
            return;
        }

        for (int i = start; i <= end; i++)
        {
            bool isPrime = true;
            if (i < 2) isPrime = false;
            for (int j = 2; j * j <= i; j++)
                if (i % j == 0) { isPrime = false; break; }
            if (isPrime) Console.Write(i + " ");
        }
    }
}
```

Activity 29.

Activity 30.

Activity 31.

```
public static class Program
{
    public static void Main()

    {
        Console.Write("Enter a word: ");
        string word = Console.ReadLine();
        bool isPalindrome = true;

        for (int i = 0; i < word.Length / 2; i++)
        {
            if (word[i] != word[word.Length - 1 - i])
            {
                isPalindrome = false;
                break;
            }
        }

        Console.WriteLine(isPalindrome ? "Palindrome" : "Not a palindrome");
    }
}
```

Activity 32.

```
public static class Program
{
    public static void Main()


    {
        Console.Write("Enter a capital letter (A-Z): ");
        char input = Console.ReadLine().ToUpper()[0];

        for (char i = 'A'; i <= input; i++)
        {
            for (char j = 'A'; j <= i; j++)
            {
                Console.Write(j);
            }
            Console.WriteLine();
        }
    }
}
```