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();
      }
   }
```

```
}
```