

EXPT 5

- **Encapsulation**

```
using System;
```

```
class BankAccount
{
    private decimal balance;

    public decimal Balance
    {
        get { return balance; }
        private set { balance = value; }
    }

    public BankAccount(decimal initialBalance)
    {
        Balance = initialBalance;
    }

    public void Deposit(decimal amount)
    {
        Balance += amount;
    }

    public void Withdraw(decimal amount)
    {
        Balance -= amount;
    }
}

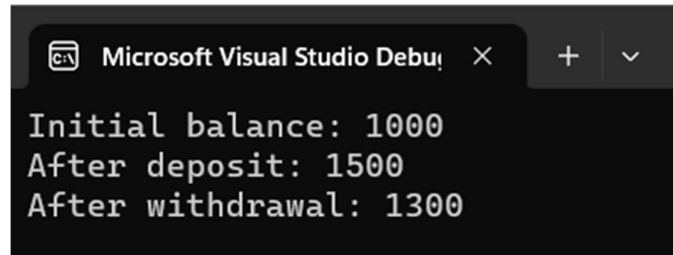
class Program
{
    static void Main(string[] args)
    {
        BankAccount account = new BankAccount(1000);

        Console.WriteLine("Initial balance: " + account.Balance);

        account.Deposit(500);
        Console.WriteLine("After deposit: " + account.Balance);

        account.Withdraw(200);
        Console.WriteLine("After withdrawal: " + account.Balance);
    }
}
```

Output: -

A screenshot of the Microsoft Visual Studio Debug Console window. The window has a dark background and a title bar that says "Microsoft Visual Studio Debug Console". Inside the console, the following text is displayed: "Initial balance: 1000", "After deposit: 1500", and "After withdrawal: 1300".

```
Initial balance: 1000
After deposit: 1500
After withdrawal: 1300
```

- **Function Overloading**

```
using System;

class Calculator
{
    public int Add(int a, int b)
    {
        return a + b;
    }

    public int Add(int a, int b, int c)
    {
        return a + b + c;
    }

    public double Add(double a, double b)
    {
        return a + b;
    }

    public string Add(string a, string b)
    {
        return a + b;
    }
}

class Program
{
    static void Main(string[] args)
    {
        Calculator calculator = new Calculator();

        int sum1 = calculator.Add(1, 2);
        Console.WriteLine("1 + 2 = " + sum1);

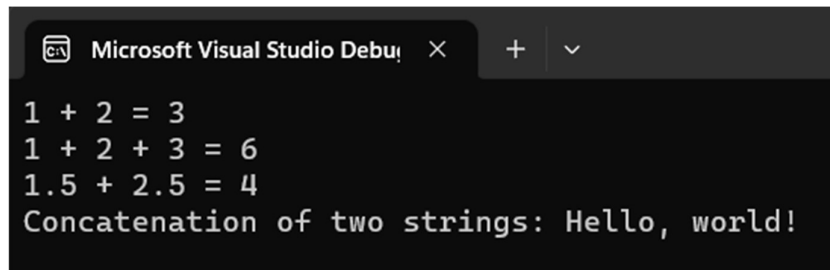
        int sum2 = calculator.Add(1, 2, 3);
```

```
        Console.WriteLine("1 + 2 + 3 = " + sum2);

        double sum3 = calculator.Add(1.5, 2.5);
        Console.WriteLine("1.5 + 2.5 = " + sum3);

        string sum4 = calculator.Add("Hello, ", "world!");
        Console.WriteLine("Concatenation of two strings: " + sum4);
    }
}
```

Output: -

A screenshot of the Microsoft Visual Studio Debug Console. The window title is "Microsoft Visual Studio Debug Console" with a close button (X) and a dropdown arrow. The output text is as follows:

```
1 + 2 = 3
1 + 2 + 3 = 6
1.5 + 2.5 = 4
Concatenation of two strings: Hello, world!
```