Assignment-2

1.Account Detail

Code:

program.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Accounts
{
   class Program
   {
      static void Main(string[] args)
      {
         int id;
         string accountType;
         double balance;
         double amount;

         Console.WriteLine("Enter account id :");
          id =  Convert.ToInt32(Console.ReadLine());

         Console.WriteLine("Enter account Type :");
         accountType= Console.ReadLine();

         Console.WriteLine("Enter account  balance:");
         balance =  Convert.ToInt32(Console.ReadLine());


         Console.WriteLine("Enter account   to Withdraw :");

         amount=  Convert.ToInt32(Console.ReadLine());


         Account a = new Account(id, accountType, balance);
```

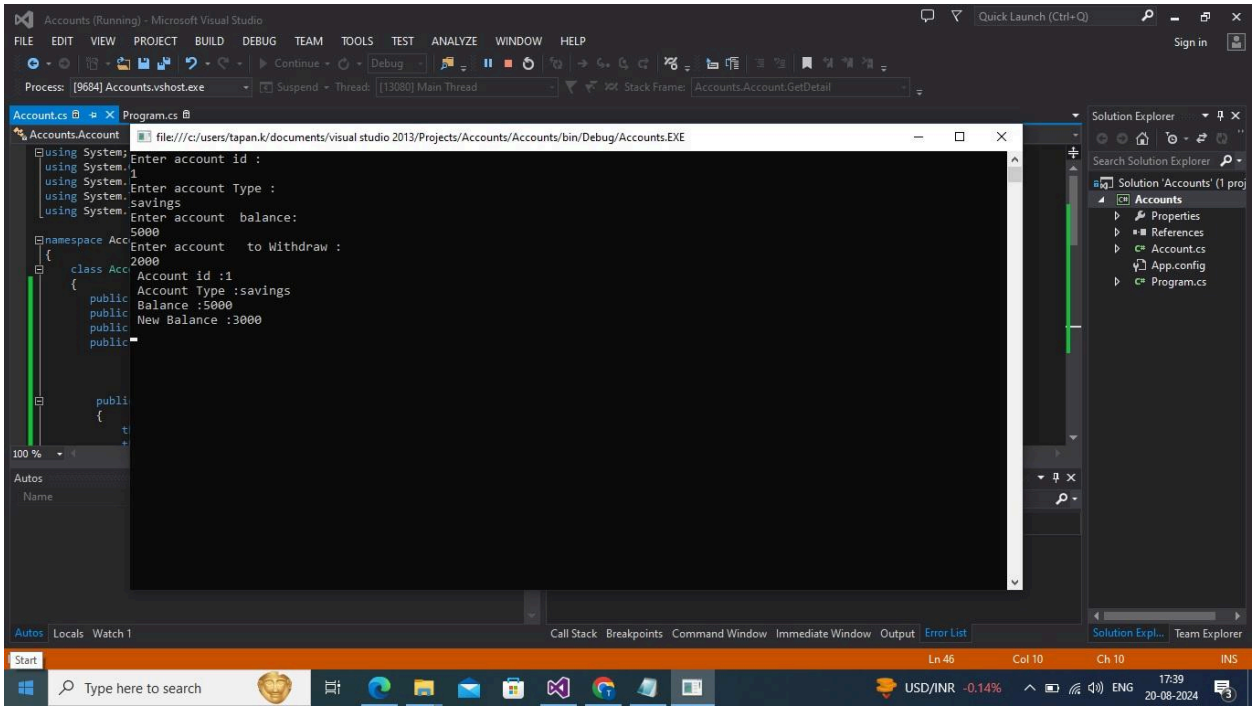
```
            a.Withdraw( amount);
            a.GetDetail();

            if(balance > amount )
            {
               balance -= amount;
               Console.WriteLine(" New Balance :" + balance  );
            }

            else
            {
               Console.WriteLine("Insufficient Balance");
            }
            Console.ReadKey();
         }
      }
}
```

Account.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Accounts
{
   class Account
   {
      public  int id {get ; set;}
      public  string accountType {get ; set;}
      public  double balance {get ; set;}
      public  double amounts {get ; set;}



       public Account( int id , string  accountType, double balance )
       {
          this.id = id;
          this.accountType = accountType;
          this.balance = balance;
```

```
        }



        public bool Withdraw(double amount)
        {

            if((balance - amount ) >0 )
            {
                //balance -= amount;
                this.amounts = balance - amount;
                return true;
            }
            else
            {
                amounts = 0;
                return false;
            }
        }



        public void  GetDetail()
        {
            Console.WriteLine(" Account id :" + id);
            Console.WriteLine(" Account Type :" + accountType );
            Console.WriteLine(" Balance :" + balance );



        }
    }
}
```

Output



2.Calculator Program

Code:

Program.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ConsoleApplication3
{
   public class Program{
   public static void Main(string[] args)
   {
      Console.WriteLine ("Enter the operator");
      string ch=Console.ReadLine();
      Calculator ca =new Calculator();
```

```
        int num1 ,num2;
        switch(ch){
            case "+":
                  Console.WriteLine("Enter the operands");
                  num1 = Convert.ToInt32(Console.ReadLine());
                 num2 =Convert.ToInt32(Console.ReadLine());

                Console.WriteLine("Result of {0}+{1} is {2}", num1, num2, ca.Addition(num1
,num2));
                  break;
            case "-":
                  Console.WriteLine("Enter the operands");
                  num1 = Convert.ToInt32(Console.ReadLine());
                  num2 = Convert.ToInt32(Console.ReadLine());
                  Console.WriteLine("Result of {0}-{1} is { ca.Subtraction(a,b)}",num1 ,num2
,ca.Subtraction(num1, num2));
                  break;
            case "*":
                   Console.WriteLine("Enter the operands");
                   num1 = Convert.ToInt32(Console.ReadLine());
                   num2 = Convert.ToInt32(Console.ReadLine());
                   Console.WriteLine("Result of {0}*{1} is {2}", num1, num2,
ca.Multiplication(num1, num2));
                  break;
             case "/":
                  Console.WriteLine("Enter the operands");
                  num1 = Convert.ToInt32(Console.ReadLine());
                  num2 = Convert.ToInt32(Console.ReadLine());
                  double rem;
                  double ans = ca.Division(num1, num2, out rem);
                  Console.WriteLine("Result of {0}/{1} is {2}",num1 ,num2,ans);
                  Console.WriteLine("Remainder ="+rem);
                  break;
            default:
                Console.WriteLine("Invalid Operator");
                break;
        }
        Console.ReadKey();
    }
```

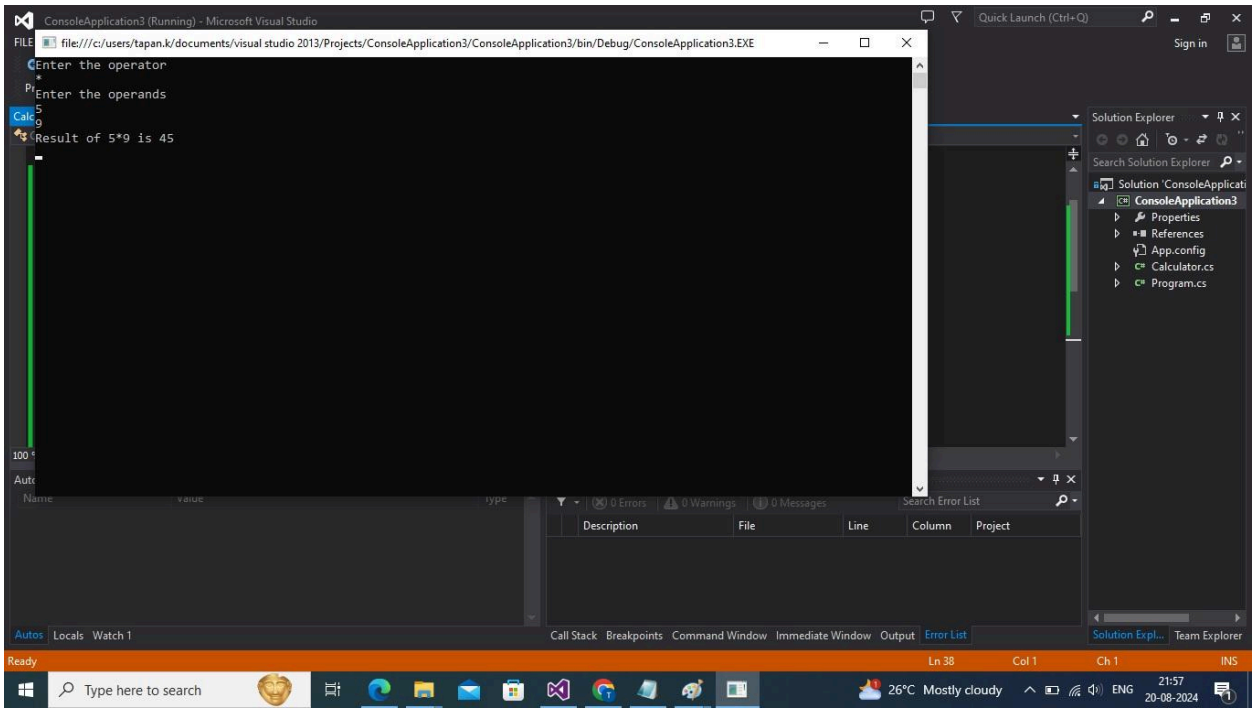
```
    }
}
```

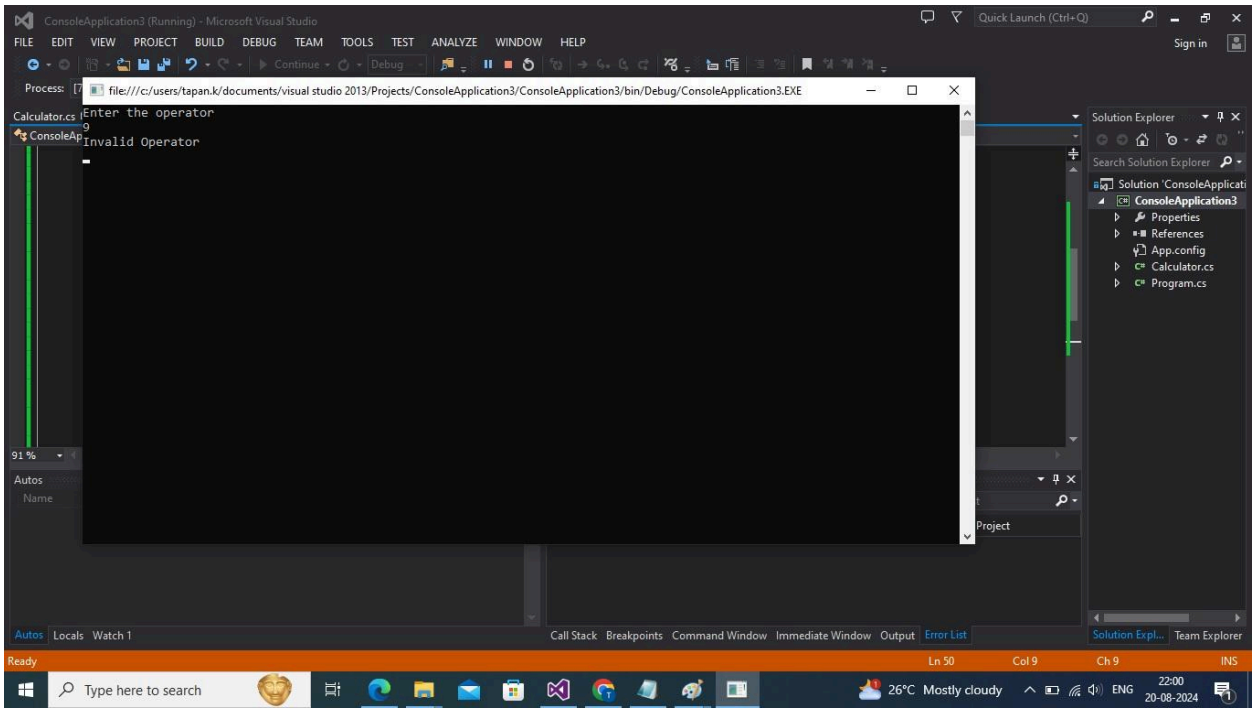
Calculator.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ConsoleApplication3
{
    public class Calculator
    {

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


        public int Subtraction(int a, int b)
        {
             return a - b;
        }


        public int Multiplication(int a, int b)
        {
            return a * b;
        }


        public double Division(int a, int b, out double remainder)
        {
            remainder = a % b;
            return (double)a / b;
```

```
        }
    }

}
```

Output


ConsoleApplication3 (Running) - Microsoft Visual Studio
file:///c:/users/tapan.k/documents/visual studio 2013/Projects/ConsoleApplication3/ConsoleApplication3/bin/Debug/ConsoleApplication3.EXE
Enter the operator
*
Enter the operands
5
9
Result of 5*9 is 45
Solution Explorer
ConsoleApplication3
Properties
References
App.config
Calculator.cs
Program.cs
Description
File
Line
Column
Project
Autos
Locals
Watch 1
Call Stack
Breakpoints
Command Window
Immediate Window
Output
Error List
Ready
Type here to search
26°C Mostly cloudy
ENG
21:57
20-08-2024


ConsoleApplication3 (Running) - Microsoft Visual Studio
file:///c:/users/tapan.k/documents/visual studio 2013/Projects/ConsoleApplication3/ConsoleApplication3/bin/Debug/ConsoleApplication3.EXE
Enter the operator
9
Invalid Operator
Solution Explorer
ConsoleApplication3
Properties
References
App.config
Calculator.cs
Program.cs
Autos
Locals
Watch 1
Call Stack
Breakpoints
Command Window
Immediate Window
Output
Error List
Ready
Type here to search
26°C Mostly cloudy
ENG
22:00
20-08-2024

3. Game and GameWithTimeLimit

CODE:

Program.cs

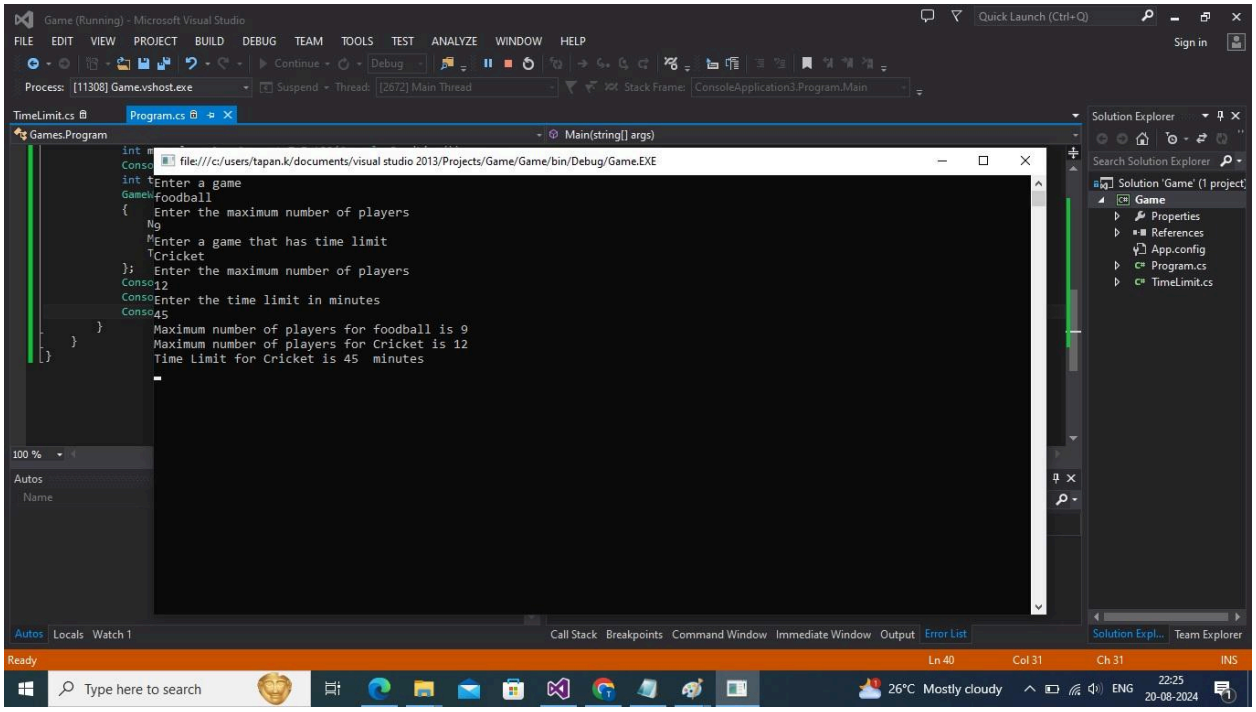
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Games
{
   public class Program
   {
      public static void Main(string[] args)
      {
         Console.WriteLine("Enter a game");
         string name1 = Console.ReadLine();

         Console.WriteLine("Enter the maximum number of players");
         int max_player1 = Convert.ToInt32(Console.ReadLine());

         Game firstGame = new Game()
         {
            Name = name1,
            MaxNumPlayers = max_player1
         };

         Console.WriteLine("Enter a game that has time limit");
         string name2 = Console.ReadLine();

         Console.WriteLine("Enter the maximum number of players");
         int max_player2 = Convert.ToInt32(Console.ReadLine());
         Console.WriteLine("Enter the time limit in minutes");
         int timeLimit = int.Parse(Console.ReadLine());
         GameWithTimeLimit secondGame = new GameWithTimeLimit()
         {
            Name = name2,
```

```
            MaxNumPlayers = max_player2,
            TimeLimit = timeLimit
        };
        Console.WriteLine(firstGame.ToString());
        Console.WriteLine(secondGame.ToString());
        Console.ReadKey();
    }
  }
}
```

Game.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Games
{
        public class Game
        {
                public string Name{ get; set;}
                public int MaxNumPlayers{get; set;}

                public override string ToString(){
                return ("Maximum number of players for "+Name+" is "+MaxNumPlayers);
               }
        }
        public class GameWithTimeLimit : Game{
         public int TimeLimit{get; set;}
         public override string ToString(){

         return ( base.ToString()+"\n"+"Time Limit for "+Name+" is "+TimeLimit+"
minutes");
         }
}

}
```

Output


Game (Running) - Microsoft Visual Studio
file:///c:/users/tapan.k/documents/visual studio 2013/Projects/Game/Game/bin/Debug/Game.EXE
Enter a game
foodball
Enter the maximum number of players
9
Enter a game that has time limit
Cricket
Enter the maximum number of players
12
Enter the time limit in minutes
45
Maximum number of players for foodball is 9
Maximum number of players for Cricket is 12
Time Limit for Cricket is 45 minutes
Solution Explorer
Game
Properties
References
App.config
Program.cs
TimeLimit.cs
Type here to search
26°C Mostly cloudy
ENG
22:25
20-08-2024