# DotNET Final Mock Assessment



Description | Code Editor

# Bank Account Management Systems

**Scenario**

Crown Bank Account Management System maintain the bank account details of the customer . They can store the details of Account Number , Customer Name , Bank Name and Branch Name .

There should be a provision to add bank details of the customer.

Easy retrieval of particular information like branch , customer name .

**Functionalities**

1. Add the account details to the database

2. Filter account details based on branch **USING LINQ.**

3. List the account holder name starting with the given letters **USING LINQ.**

Create a class named **BankDetails** with below private attributes

| Data Type | Variable Name |
|---|---|
| int | _acctno |
| string | _name |
| string | _bankname |
| string | _branch |

Include appropriate **public Properties.**

| | |
|---|---|
| string | Name |
| string | BankName |
| string | Branch |

Create a class **Program** with the following:

**public static SqlConnection Sqlcon { get; set; }**

This property is already declared as part of the code snippet. Assign the new database connection to this property and use in the program.

| Method Name | Method Description |
|---|---|
| public static List<BankDetails> GetAllBankDetails() | Retrieve all the bank details from the database and returns t METHOD IMPLEMENTATION IS ALREADY GIVEN AS CODE TE |
| public static void AddBankDetails(BankDetails bankdetails) | This method is used to add the bank details to the bank tabl bankdetails object with values is passed as argument to this |
| public static IEnumerable<BankDetails> GetBankByBranch(string branch) | This method should filter the bank details from the 'bankList using GetAllBankDetails method. Filter based on the matchir USING LINQ and assign the result to **IEnumerable< BankI** |
| public static IEnumerable<BankDetails> GetNameBySearch(string letters) | This method should list the bank details from the 'bankList' using GetAllBankDetails method ,based on the given letters and assign the result to **IEnumerable< BankDetails >**<br>Example :<br>Search string : Jo<br>Output:<br>John<br>Johan |

**NOTE:**

Create a class named **DBConnection** with the following method.

| Method | Description |
|---|---|
| public SqlConnection GetConnection() | This method is used to connect to **SQLSERVER** database. Use the conne "SqlCon" in App.config to create a connection. |

**Refer here for App.config file**

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
<startup>
<supportedRuntime version="v4.0" sku=".NETFramework,Version=v4.6.1" />
</startup>
<connectionStrings>
<add name="SqlCon"
connectionString="server=localhost;database=StudentDB;uid=XXXXX;password=XXXXX
</connectionStrings>
</configuration>
```

NOTE : You need NOT change this file. Below Table structure is already created for you.

| Table Name : bank | |
|---|---|
| acctno | Int (primary key) |
| name | varchar(50) |
| bankname | varchar(50) |
| branch | varchar(50) |

**Sample Data is Already given in the bank table**

| AcctNo | Name | Bank Name | Branch |
|---|---|---|---|
| 1001 | Peter | SBI | Mumbai |
| 1002 | Johan | HDFC | Chennai |

1005 John HDFC Mumbai

You can perform the logic based on the given data.

**Important Note:**

1. "**GetMyExpression**" and "**GetMyExpression1**" METHODS ARE FOR TESTING YOUR LINQ QUERY EXPRESSION. So fill your query expression in the space holder provided. ONLY THE QUERY EXPRESSION. Nothing more need to be implemented in this method.

**Sample Input/ Output:**

Enter the choice:

1. Add Bank Details

2. Get Bank Name by Branch

3. Get Account Holder Name by search letters

4. Exit

**1**

Enter the Bank Details

**1006**

**Ravi**

**ICICI**

**Chennai**

Details Added successfully

1. Add Bank Details

2. Get Bank Name by Branch

3. Get Account Holder Name by search letters

4. Exit

**2**

| AcctNo | Name | Bank Name | Branch |
|---|---|---|---|
| 1001 | Peter | SBI | Mumbai |
| 1005 | John | HDFC | Mumbai |

1. Add Bank Details

2. Get Bank Name  by Branch

3. Get Account Holder Name by search letters

4. Exit

**3**

Enter the search letters

**Jo**

Account Holder Name with Given Letters

Johan

John

1. Add Bank Details

2. Get Bank Name  by Branch

3. Get Account Holder Name by search letters

4. Exit

**4**

# Requested files

## Program.cs

```
using System.Threading.Tasks;
using System.Data.SqlClient;
using System.Linq.Expressions;

public class Program  //DO NOT change the class name
{
    //Use the below declarations
    public static SqlConnection Sqlcon { get; set; }
    public static List<BankDetails> bankList;

    public static void Main(string[] args)    //DO NOT change the 'Main' method signature
    {
        GetAllBankDetails();   //Add logic to display the values from returned list
        //Fill your code here
    }


       //You need not change this method implementation.
        public static List<BankDetails> GetAllBankDetails()
        {

            List<BankDetails> lstBankDetails = new List<BankDetails>();
            string queryString = "Select * from bank";
            DBConnection conobj=new DBConnection();
            Sqlcon = conobj.GetConnection();
            Sqlcon.Open();
            SqlCommand command = new SqlCommand(queryString, Sqlcon);
            SqlDataReader reader = command.ExecuteReader();
            while (reader.Read())
                {
                    lstBankDetails.Add(new BankDetails(Convert.ToInt32(reader[0]), reader[1].ToString(), reader[2].ToString(), reader[3].ToString()));
                }
                reader.Close();
            Sqlcon.Close();
           return lstBankDetails;

        }

         //Implement 'AddBankDetails' method


   public static IEnumerable<BankDetails> GetBankByBranch(string branch)
    {
        Program.bankList=Program.GetAllBankDetails();       //This is required to populate values in 'bankList'

        //Write the LINQ query with 'Program.bankList'
    }

    public static IEnumerable<BankDetails> GetNameBySearch(string letters)
    {
        //Write the LINQ query with 'Program.bankList'
    }

    //THE BELOW METHODS ARE FOR TESTING PURPOSE ONLY. ADD CODE ONLY IN THE COMMENTED SECTION
    public static ParameterExpression variableExpr = Expression.Variable(typeof(IEnumerable<BankDetails>), "sampleVar");
    public static Expression GetMyExpression(string branch)
    {
        Program.bankList=Program.GetAllBankDetails();

        Expression assignExpr = Expression.Assign(variableExpr,
```

```
    68     public static Expression GetMyExpression1(string letters)
    69     {
    70         Expression assignExpr = Expression.Assign(variableExpr,
Expression.Constant(/** Copy the linq query from the 'GetNameBySearch' method and paste
here **));
    71         return assignExpr;
    72     }
    73 }
    74
    75
```

## DBConnection.cs

```
     1 using System;
     2 using System.Data.SqlClient;
     3 using System.Xml;
     4 using System.IO;
     5 using System.Configuration;
     6
     7 public class DBConnection //DO NOT change the class name
     8 {
     9     //Fill Code Here
    10     //Implement 'GetConnection' method
    11 }
    12
```

## App.config

```
     1 <!-- THIS IS FOR REFERENCE ONLY. YOU ARE NOT REQUIRED TO MAKE ANY CHANGES HERE -->
     2
     3 <?xml version="1.0" encoding="utf-8" ?>
     4 <configuration>
     5     <startup>
     6         <supportedRuntime version="v4.0" sku=".NETFramework,Version=v4.6.1" />
     7     </startup>
     8   <connectionStrings>
     9     <add name="SqlCon"
connectionString="server=localhost;database=StudentDB;uid=XXXXX;password=XXXXXX;"/>
    10   </connectionStrings>
    11 </configuration>
```

## BankDetails.cs

```
using System.Threading.Tasks;

public class BankDetails   //DO NOT change the class name
{
       //Implement private attribues
       //Implement public properties

        public BankDetails(int _acctno, string _name, string _bankname, string
_branch)
        {
            this._acctno = _acctno;
            this._name = _name;
            this._bankname = _bankname;
            this._branch = _branch;
        }

        public BankDetails (){}


}

```