

Question No. 1

Database Setup:

Add Connection?×

Enter information to connect to the selected data source or click "Change" to choose a different data source and/or provider.

Data source:

Microsoft SQL Server (SqlClient)Change...

Server name:

DESKTOP-AHPFOMS\SQLEXPRESS▼Refresh

Log on to the server

Authentication:

Windows Authentication▼

User name:

Password:

Encrypt:

Optional (False)▼

☐ Trust Server Certificate

☐ Save my password

Connect to a database

☒ Select or enter a database name:

Employee▼

☐ Attach a database file:

Browse...

Logical name:

Advanced...

Test Connection

OK

Cancel

Queries:

Create Database

```
CREATE DATABASE Employee
```

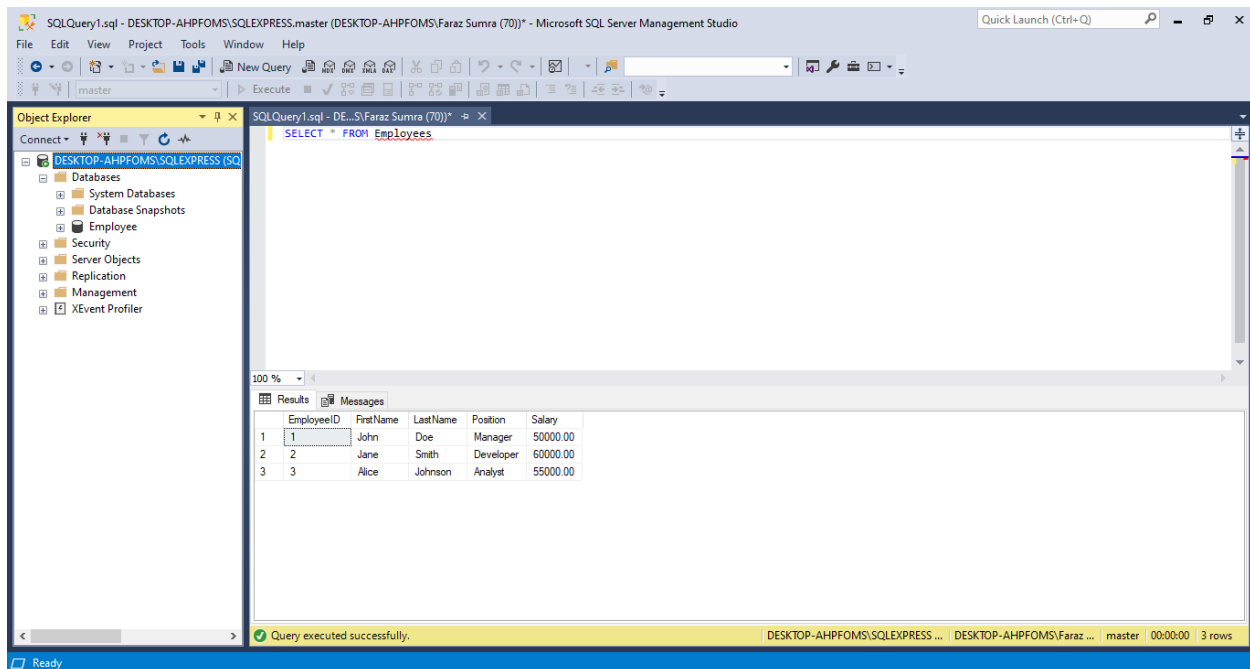
Create Table

```
CREATE TABLE Employees(  
    EmployeeID VARCHAR(50),  
    FirstName VARCHAR(50),  
    LastName VARCHAR(50),  
    Position VARCHAR(50),  
    Salary VARCHAR(50),  
);
```

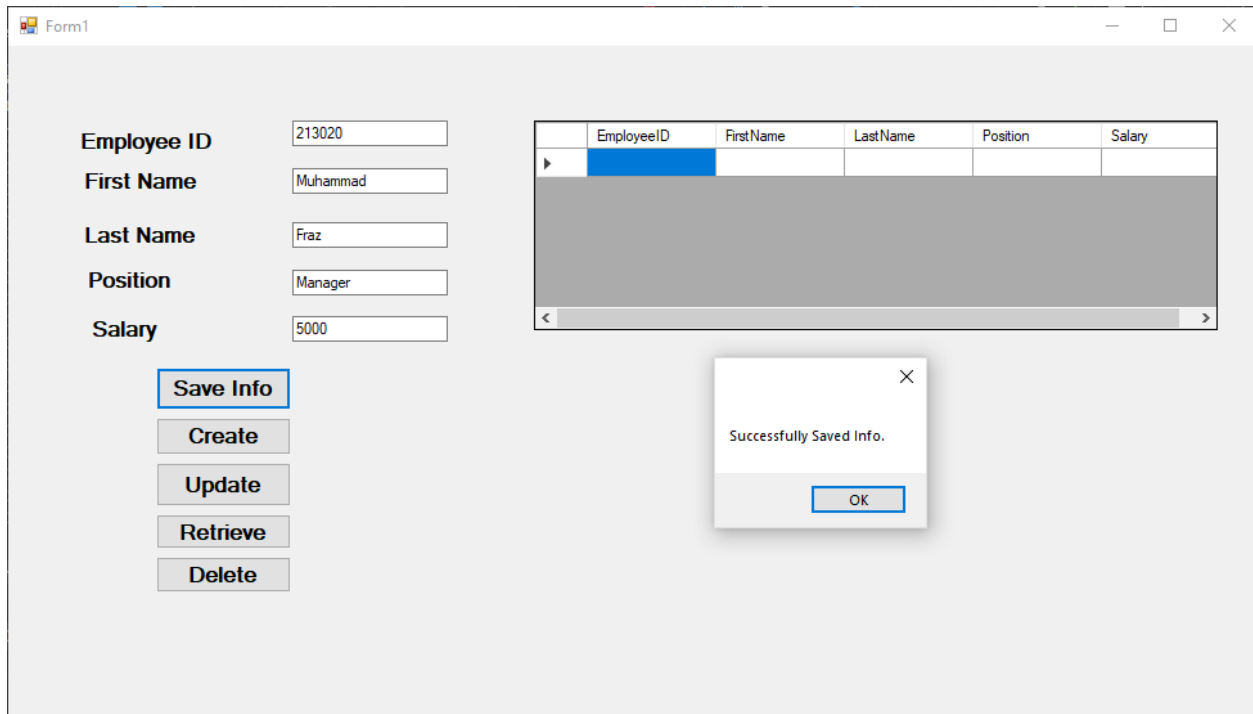
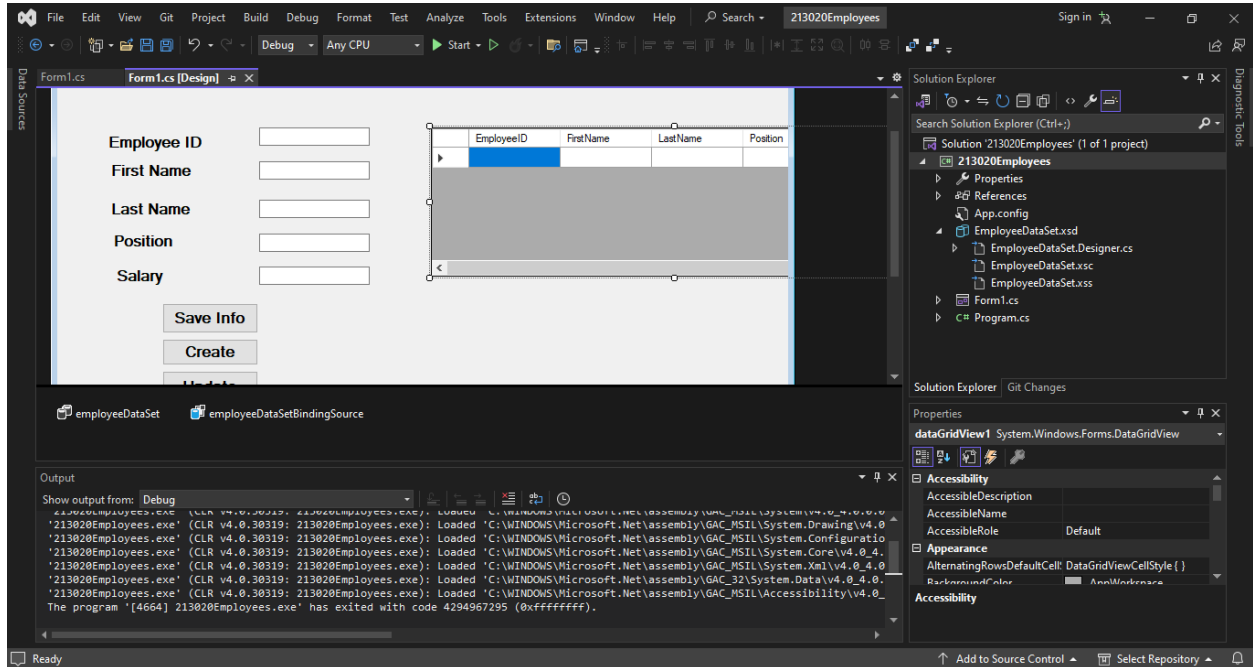
```
INSERT INTO Employees (EmployeeID, FirstName, LastName, Position, Salary)  
VALUES (1, 'John', 'Doe', 'Manager', 50000.00);
```

```
INSERT INTO Employees (EmployeeID, FirstName, LastName, Position, Salary)  
VALUES (2, 'Jane', 'Smith', 'Developer', 60000.00);
```

```
INSERT INTO Employees (EmployeeID, FirstName, LastName, Position, Salary)  
VALUES (3, 'Alice', 'Johnson', 'Analyst', 55000.00);
```



Save Info:



Code:

```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
```

```

using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Data.SqlClient;
using System.Windows.Forms;

namespace _213020Employees
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }
        private void Form1_Load(object sender, EventArgs e)
        {
            LoadData();
        }

        private void LoadData()
        {
            try
            {
                using (SqlConnection connection = new
SqlConnection(connectionString))
                {
                    connection.Open();

                    string query = "SELECT * FROM Employees";

                    using (SqlDataAdapter adapter = new SqlDataAdapter(query,
connection))
                    {
                        EmployeeDataSet employeeDataSet = new EmployeeDataSet();

                        adapter.Fill(employeeDataSet, "Employees");
                        dataGridView1.DataSource =
employeeDataSet.Tables["Employees"];
                    }
                }
            }
            catch (Exception ex)
            {
                MessageBox.Show("Error: " + ex.Message);
            }
        }
        private string connectionString = "Data Source=DESKTOP-
AHPFOMS\\SQLEXPRESS;Initial Catalog=Employee;Integrated
Security=True;Encrypt=False";

        private void textBox1_TextChanged(object sender, EventArgs e)
        {
            textBox1.Text = textBox1.Text;
        }

        private void textBox2_TextChanged(object sender, EventArgs e)
        {
            textBox2.Text = textBox2.Text;
        }
    }
}

```

```

    }

    private void textBox3_TextChanged(object sender, EventArgs e)
    {
        textBox3.Text = textBox3.Text;
    }

    private void textBox4_TextChanged(object sender, EventArgs e)
    {
        textBox4.Text = textBox4.Text;
    }

    private void button1_Click(object sender, EventArgs e)
    {
        try
        {
            MessageBox.Show("Successfully Saved Info.");
        }
        catch (Exception ex)
        {
            MessageBox.Show("Error: " + ex.Message);
        }
    }

    private void button2_Click(object sender, EventArgs e)
    {
    }

    private void button3_Click(object sender, EventArgs e)
    {
    }

    private void button5_Click(object sender, EventArgs e)
    {
    }

    private void button4_Click(object sender, EventArgs e)
    {
        try
        {
            string employeeInfo = RetrieveInfo();
            MessageBox.Show("Retrieved Employee Info:\n" + employeeInfo);
        }
        catch (Exception ex)
        {
            MessageBox.Show("Error: " + ex.Message);
        }
    }

    private string RetrieveInfo()
    {

```

```

        try
        {
            using (SqlConnection connection = new
SqlConnection(connectionString))
            {
                connection.Open();

                string query = "SELECT * FROM Employees WHERE EmployeeID =
@EmployeeID";


                using (SqlCommand command = new SqlCommand(query, connection))
                {
                    command.Parameters.AddWithValue("@EmployeeID", 1);

                    using (SqlDataReader reader = command.ExecuteReader())
                    {
                        if (reader.Read())
                        {
                            int employeeID = reader.GetInt32(0);
                            string firstName = reader.GetString(1);
                            string lastName = reader.GetString(2);
                            string position = reader.GetString(3);
                            decimal salary = reader.GetDecimal(4);
                            return $"EmployeeID: {employeeID}\nFirstName:
{firstName}\nLastName: {lastName}\nPosition: {position}\nSalary: {salary}";
                        }
                        else
                        {
                            throw new Exception("Employee not found.");
                        }
                    }
                }
            }
        }
        catch (Exception ex)
        {
            throw new Exception("Error retrieving employee info: " +
ex.Message);
        }
    }
}

```

Question No. 2 Part 1

SQL Server Connection

 Connect to Server ✕

SQL Server

Server type: Database Engine

Server name: DESKTOP-AHPFOMS\SQLEXPRESS

Authentication: Windows Authentication

User name: DESKTOP-AHPFOMS\Faraz Sumra

Password:

☐ Remember password

Connect Cancel Help Options >>

SQLQuery2.sql - DESKTOP-AHPFOMS\SQLEXPRESS.Book (DESKTOP-AHPFOMS\Faraz Sumra (64)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Quick Launch (Ctrl+Q)

Object Explorer

Connect

DESKTOP-AHPFOMS\SQLEXPRESS (SQL Server 16.0.10058)

Database Snapshots

Database Diagrams

Tables

System Tables

FileTables

External Tables

Graph Tables

dbo._EFMigrationsHistory

dbo.Book_Info

Columns

BookId (PK, int, not null)

BookTitle (varchar(50), null)

BookAuthor (varchar(50), null)

ISBN (int, null)

Publication_Year (nvarchar(50), null)

Keys

Constraints

Triggers

Indexes

Statistics

Views

External Resources

Synonyms

Programmability

Query Store

SQLQuery2.sql - DESKTOP-AHPFOMS\SQLEXPRESS.Book (DESKTOP-AHPFOMS\Faraz Sumra (64))

```
SELECT * FROM Book_Info
```

100 %

Results

	BookId	BookTitle	BookAuthor	ISBN	Publication_Year
1	1	The Silent Symphony	Emily Greene	1234	2020
2	2	Quantum Minds	Jonathan Parker	1236	2018
3	3	Lost in Translation	Isabel Rivers	1237	2015

Messages

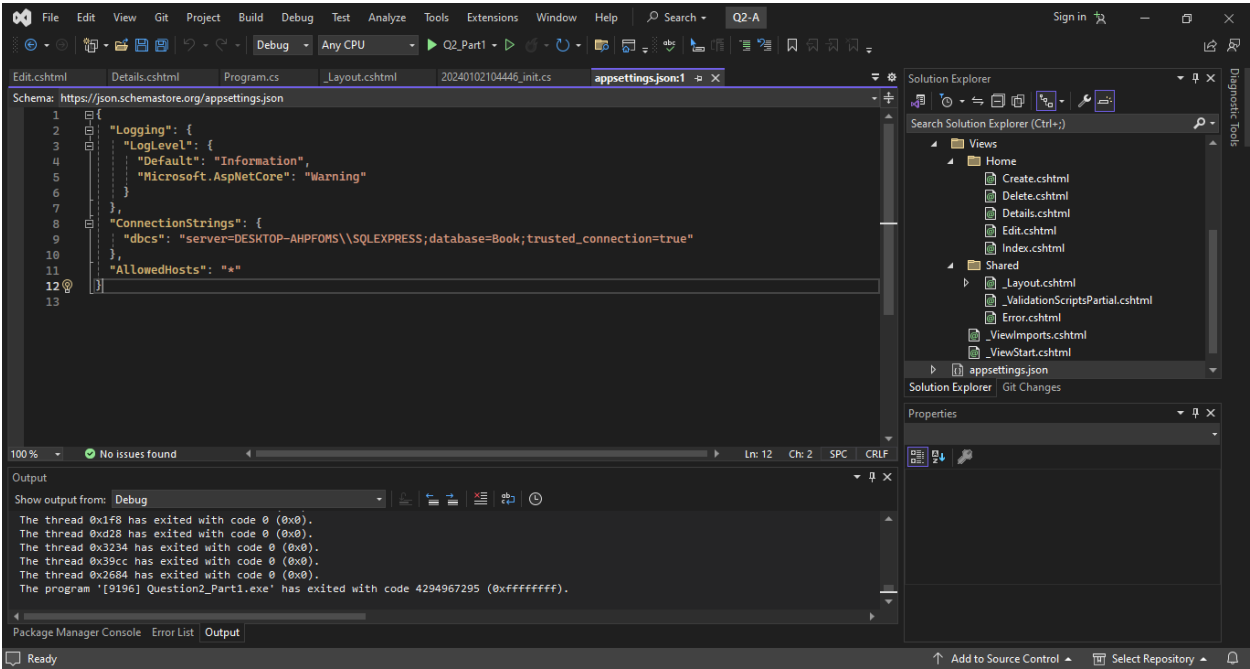
Query executed successfully.

DESKTOP-AHPFOMS\SQLEXPRESS ... | DESKTOP-AHPFOMS\Faraz ... | Book | 00:00:00 | 3 rows

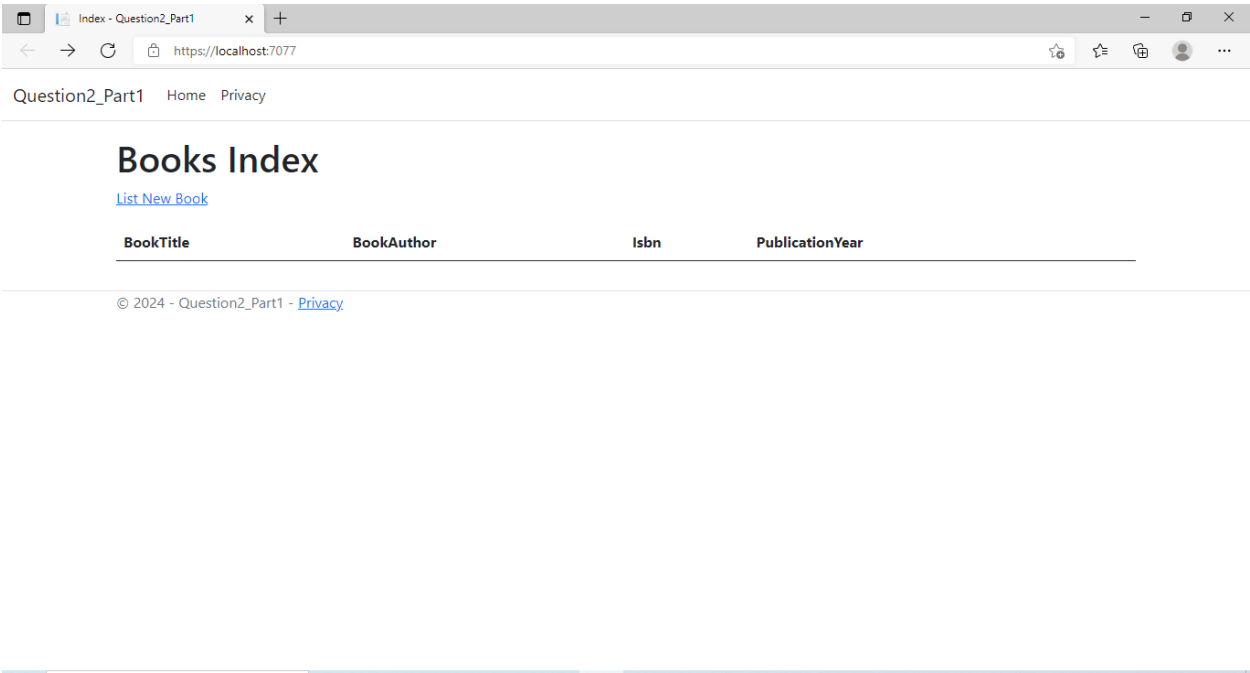
Ready

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Visual Studio Connection



Web



Create

Create - Question2_Part1

https://localhost:7077/Home/Create

Question2_Part1HomePrivacy

Create

Book Details

BookId

1

BookTitle

The Silent Symphony

BookAuthor

Emily Greene

Isbn

9781455542671

PublicationYear

2020

Create

[Back to Book List Page](#)

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Edit

Edit - Question2_Part1

https://localhost:7077/Home/Edit/2

Question2_Part1HomePrivacy

Edit

Book Details

BookTitle

Quantum Minds

BookAuthor

Jonathan Parker

Isbn

1236

PublicationYear

2018

Save

[Back to Book List Page](#)

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Details

Details - Question2_Part1

https://localhost:7077/Home/Details/2

Question2_Part1

Home

Privacy

Details

Book Details

BookTitle

Quantum Minds

BookAuthor

Jonathan Parker

Isbn

1236

PublicationYear

2018

Edit

Back to Book List Page

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Delete

Delete - Question2_Part1

https://localhost:7077/Home/Delete/2

Question2_Part1

Home

Privacy

Delete

Are You sure You want to delete this Book?

Book Details

BookTitle

Quantum Minds

BookAuthor

Jonathan Parker

Isbn

1236

PublicationYear

2018

Delete


Back to Book List Page

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Privacy

Question No. 2 Part 2

SQL Server Connection

 Connect to Server ✕

SQL Server

Server type: Database Engine

Server name: DESKTOP-AHPFOMS\SQLEXPRESS

Authentication: Windows Authentication

User name: DESKTOP-AHPFOMS\Faraz Sumra

Password:

☐ Remember password

Connect Cancel Help Options >>

SQLQuery2.sql - DESKTOP-AHPFOMS\SQLEXPRESS.Product (DESKTOP-AHPFOMS\Faraz Sumra (64)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Product

Object Explorer

- Connect
- DESKTOP-AHPFOMS\SQLEXPRESS (SQ)
 - Databases
 - System Databases
 - Database Snapshots
 - Book
 - Employee
 - Product
 - Database Diagrams
 - Tables
 - Views
 - External Resources
 - Synonyms
 - Programmability
 - Query Store
 - Service Broker
 - Storage
 - Security
 - Security
 - Server Objects
 - Replication
 - Management
 - XEvent Profiler

SQLQuery2.sql - DESKTOP-AHPFOMS\SQLEXPRESS.Product (DESKTOP-AHPFOMS\Faraz Sumra (64))

```
SELECT * FROM Product_Info
```

100 %

	Id	ProductName	Category	Price	Quantity
1	1	Smart Watch X1	Electronics	99.99	50
2	2	Eco-Friendly Water Bottle	Home & Kitchen	12.5	100
3	3	Performance Running Shoes	NULL	79.99	30

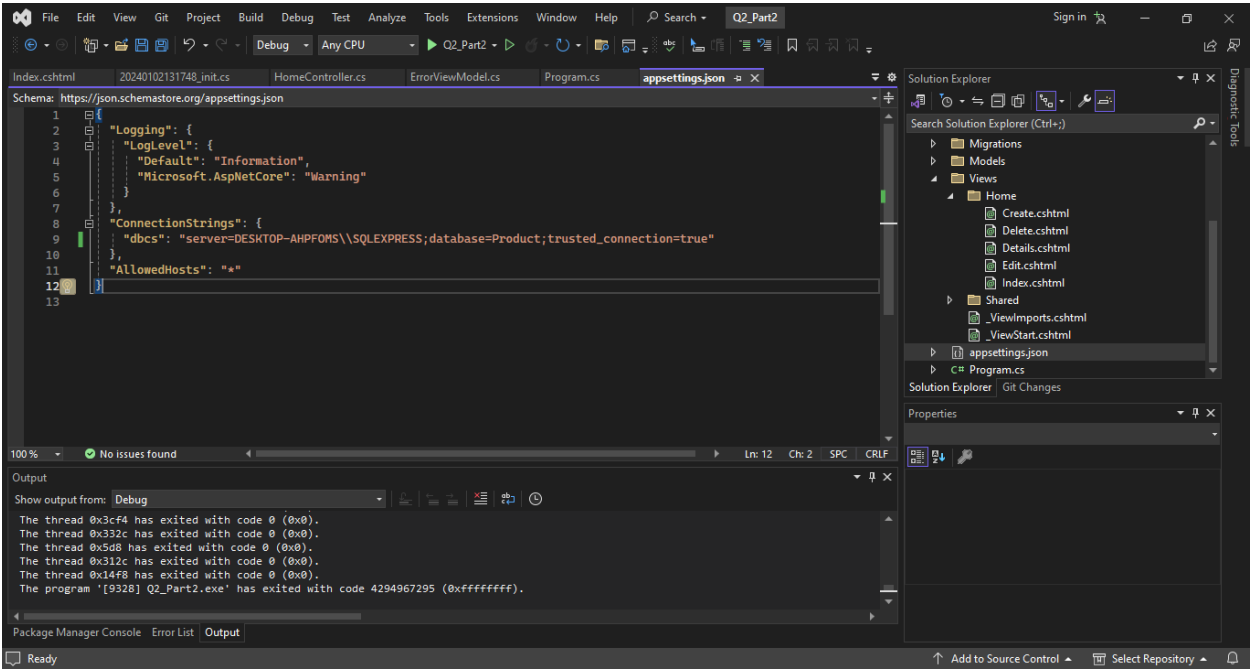
Results Messages

Query executed successfully.

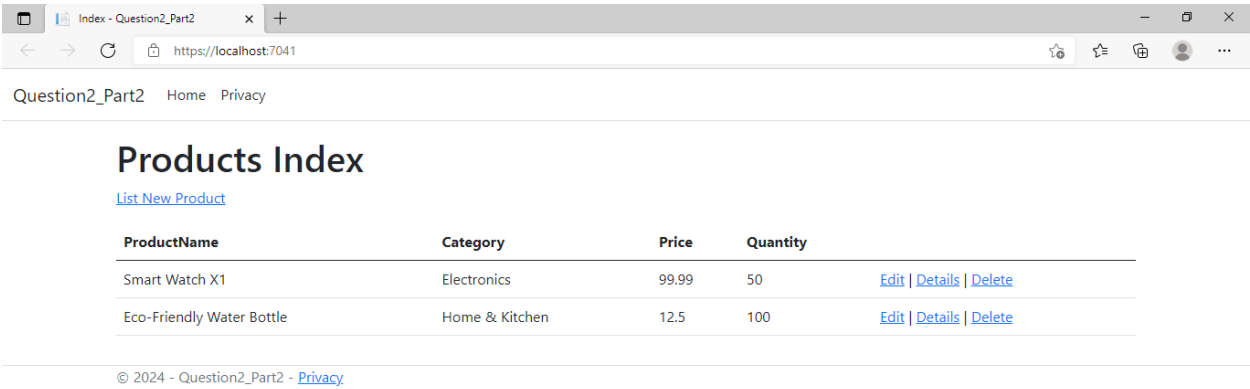
DESKTOP-AHPFOMS\SQLEXPRESS ... | DESKTOP-AHPFOMS\Faraz ... | Product | 00:00:00 | 3 rows

Ready Ln 1 Col 27 Ch 27 INS

Visual Studio Connection



Web



Create

Create - Question2_Part2

https://localhost:7041/Home/Create

Question2_Part2 Home Privacy

List New Product

Product Details

Id

3

ProductName

Performance Running Shoes

Category

Fashion & Footwear

Price

79.99

Quantity

30

Create

Back to Product List Page

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Edit

Edit - Question2_Part2

https://localhost:7041/Home/Edit/1

Question2_Part2 Home Privacy

Edit

Product Details

ProductName

Smart Watch X1

Category

Electronics

Price

99.99

Quantity

50

Save

Back to Product List Page

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Details

Details - Question2_Part2

https://localhost:7041/Home/Details/1

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Details

Product Details

ProductName	Smart Watch X1
Category	Electronics
Price	99.99
Quantity	50

[Edit Product Details](#) | [Back to Product List Page](#)

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Delete

Delete - Question2_Part2

https://localhost:7041/Home/Delete/1

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Question2_Part2 Home Privacy

Delete

Are You sure you want to delete this Product?

Product Details

ProductName	Smart Watch X1
Category	Electronics
Price	99.99
Quantity	50

Delete

 | [Back to Product List Page](#)

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Products Index

[List New Product](#)

ProductName	Category	Price	Quantity	
Smart Watch X1	Electronics	99.99	50	Edit Details Delete
Eco-Friendly Water Bottle	Home & Kitchen	12.5	100	Edit Details Delete
Performance Running Shoes		79.99	30	Edit Details Delete