



**American International University-Bangladesh
(AIUB)**

**Department of Computer Science Faculty of
Science & Technology (FST)**

SOFTWARE REQUIREMENT ENGINEERING

PROJECT TITLE: Inventory management system

Name: Sourav Gupta Ananda

ID: 17-35771-3 Project_SRE_Sec_B

In this project we will work on the design and development of a real life **inventory management system**, and for this we will use the Microsoft Visual Studio 2013 platform, and we will use Microsoft SQL Server 2012 for the database.

This project management software is mainly used in professional business, through which we can design all our work methods in a very organized way, and also share any project responsibility in stages, i.e. who will be involved with it to complete a project properly. And the issues that they will be responsible for can easily be expressed in a categorical form,

If there is a change in the requirements of our project, then it is very easy for everyone to understand and take the next step accordingly, in fact the communication method can be made very easy,

Problem domain:

In this project, inventory management system software is being developed through which the user can save and update and delete his product information from there. In addition, we are creating a Windows calculator through which all types of mathematical operations can be performed:

We have already completed the design and development of the calculator,

We have now completed the design of the login form of the inventory management system and now working on the design of the dashboard of this software.

Technology:

Our Inventory management system is a desktop application.

Our inventory management system software is built using Visual Studio 2013 and Microsoft SQL Server 2012 platforms.

We are building our calculator based on Microsoft Visual Studio 2013,

Through our inventory management system software, two types of users can login to it, one is admin and the other is normal user,

This software allows you to add different types of products, delete different types of products, and update product information,

And with this software they will be able to store the information to sell the products, and finally generate a sales voucher, etc. All the information but will be saved in our database,

Manager can add or remove employee from database and he or she can edit sales information.

Conceptual Foundation of the Project:

They have a huge market demand for this event management system, now in the digital age everyone wants to control all kinds of activities in a very smart way, now they are bringing different types of business from offline to digital, so they can easily see the current state of their business and they can track all information,

Also, it is now easy to predict and control which products are doing well in the market, which products are more interested in buying customers, and which products may increase demand in the future, so that the market will remain stable in the future.

Also, with so many products available today, it's very difficult to track the expiration date of a product, but if we use software here, that software will automatically give us information about which product has expired.

Moreover, we can easily access all the information related to the quantity of a product we have in stock, you'll be getting ideas on how much profit your business is making,

So it can be said that we have a lot of demand for this software in the market,

Social Impact Analysis:

Our management software will also play a very important role in our social life, as we have already seen that the extra selling price of different products at different times adversely affects the lives of ordinary people.

The price of onion has gone up several times even a few days ago and the common man cannot afford to buy it, meaning that no one will be able to stockpile any product using this software and give wrong information which will keep the market stable.

Development Plan

Planning and Requirement Analysis:

Before designing an inventory management system, it is necessary to collect the needs and requirements well, what kind of functionality the user wants to complete through this system, finally to consider it seriously, that is, to collect information from them, to analyze it well.

User requirements are very important. We have to analyze it well and design the system through priority.

Defining Requirements:

We need to sort out the most important requirements from the user requirements so that we don't miss any important requirements.

Designing the Product Architecture:

We will design the system based on the user's request and for this we will use Microsoft Visual Studio 2013 and Microsoft SQL Server 2012 to create this electric management system software.

The building or Developing the Product: For each inventory management system software, we first need to design a login system. Once the login is approved, it will be able to access the management system dashboard.

Testing the Product:

Once the design and development is complete we must do a good software testing so that there are no exceptions, we also need to make sure one is working properly,

Deployment in the Market and Maintenance:

This management software needs to be maintained periodically so that our system can run properly,

Marketing Plan

We are currently very popular social media for marketing, nowadays people spend a lot of time through this social media, so we can run this management system software campaign for our marketing through YouTube, Facebook's advertisement.

We don't have to spend extra for this management system software advertisement, because we don't need much money for advertising on Facebook and YouTube.

Cost and Profit Analysis

Total costing including development cost=150000

Publishing cost=6000

Marketing cost=10,000

Then total earning =250000

Total costing=166000

$$\begin{aligned}\text{Total costing} &= \text{Development cost} + \text{Publishing cost} + \text{Marketing cost} \\ &= 150000 + 6000 + 10000 \\ &= 166000\end{aligned}$$
$$\begin{aligned}\text{Profit} &= \text{total earning} - \text{total costing} \\ &= 250000 - 166000 \\ &= 84000 \text{ TK}\end{aligned}$$



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souravgupta1066@gmail.com

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29 days remaining

SG an ai

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Inventory Management...

...

Inventory Management System

List Board Timeline Calendar Dashboard Progress Forms More...

1 task completed today

All tasks Filter 14 Sort Rules Apps Fields ...

To do

Doing

Done

+ Add column

Software requirement

SG Friday

Medium At risk

1

Requirement analysis

ai Tuesday

Medium At risk

1

Project planning

SG Tomorrow

High On track

1 1

Requirement specification

an Sep 10 - 14

High At risk

Planning, Design & Technology used

ai Sep 11 - 15

High Off track

Requirement gathering

an Today

High On track

1

Project category

ai Saturday

Medium At risk

1

Introduction & Objective

SG Today - Sep 11

Low On track

1

Trial 29 days left

[Add billing info](#)

SG

app.asana.com/0/1193026893765873/calendar

Inventory Management System

Calendar

August 2020

Tasks:

- an Requirement specification
- ai Planning, Design & Technology used
- SG Introduction & Objective
- an Requirement gathering
- SG Project planning
- SG Software requirement
- an Login system design
- ai System design
- ai Requirement analysis

Sourav's Tasks - My Workspace

Last task completed on Wednesday

All your tasks in one place

Tasks assigned to you from any Asana project will appear here, as well as private tasks you create for yourself.

Watch 30-second video

+ Add task

Recently assigned

- Login system design
- Software requirement
- Project planning
- Finish setting up your first project
- Invite your teammates and start collaborating
- Download Asana's mobile app to manage projects on the go

Today

Apps http://localhost/sou... New Tab (1) Facebook google translate ... YouTube Gmail Translate Home

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Inventory Management...

Added Follow up on "Software requirement"

Inbox [Send feedback](#)

Activity Archive

Past 7 Days

Inventory Management System

Software requirement

You have a task due **Yesterday**.
Yesterday at 12:00am

Inventory Management System

Project planning

You have a task due **Sep 10**.
2 days ago

Invite your teammates and start collaborating

You have a task due **Sep 10**.
2 days ago

Archive All Messages

Mark Complete

1 Like

Software requirement

Assignee SG Sourav Gupta

Due date Yesterday

Projects Inventory Management System To do

Priority Medium

Status At risk

Description Software requirement

+ Add subtask

SG Sourav Gupta created this task. 3 days ago

SG Ask a question or post an update...

Collaborators +

Join Task

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Inventory Management...

Inventory Management System

List **Board** Timeline Calendar Dashboard Progress Forms More...

2 tasks completed today

All tasks Filter Sort Rules Apps Fields

To do Doing Done + Add column

Inventory management system Coding
SG Tomorrow
Medium At risk 1 Like 1 Comment 1 Share

System design
an Today
High At risk 1 Like

Login system design
SG Today
Medium At risk 1 Like

Software requirement
SG Sep 11
Medium At risk 1 Like

Project planning
SG Sep 10
High On track 1 Like 1 Comment

Calculator App Design
SG Today
Medium On track 1 Like 1 Comment 1 Share

Calculator App
ai Today
Medium At risk 1 Like

Calculator App Development
an Tomorrow
Medium At risk 1 Like 1 Comment 1 Share

Requirement specification
an Sep 10 - Today
High At risk 1 Like

Inventory management system Design
SG Sep 10 - Today
High At risk 1 Like

Introduction & Objective
SG Sep 6 - 11
Low On track 1 Like

Project category
ai Sep 8 - 12
Medium At risk 1 Like

Requirement analysis
ai Sep 8 - 13
Medium At risk 1 Like

Requirement gathering
an Sep 7 - 9
High On track 1 Like

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Inventory Management...

Inventory Management System

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+ Add task

All tasks Filter Sort Rules Apps Fields

Task name	Assignee	Due date	Priority	Status	
To do					
Inventory management system Coding	SG Sourav Gupta	Tomorrow	Medium	At risk	
System design	an anansourav...	Today	High	At risk	
Login system design	SG Sourav Gupta	Today	Medium	At risk	
Software requirement	SG Sourav Gupta	Sep 11	Medium	At risk	
Project planning	SG Sourav Gupta	Sep 10	High	On track	
Planning, Design & Technology used	ai anansourav...	Sep 11 – 15	High	Off track	
Add task...					
Doing					
Calculator App Design	SG Sourav Gupta	Today	Medium	On track	
Calculator App	ai anansourav...	Today	Medium	At risk	
Calculator App Development	an anansourav...	Tomorrow	Medium	At risk	
Requirement specification	an anansourav...	Sep 10 – Today	High	At risk	
Inventory management system Design	SG Sourav Gupta	Sep 10 – Today	High	At risk	
Add task...					
Done					

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Inventory Management...

Inventory Management System

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7 tasks completed today

All tasks Filter Sort Rules Apps Fields

To do

Doing

Done

+ Add column

Inventory management system Coding And Development

Requirement specification

Introduction & Objective

System design

Planning, Design & Technology used

Project category

Inventory management system Coding

Add DBMS

Calculator App

Login system design

Project planning

Software requirement

Inventory management system Design

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24 days remaining

SG

an

an

+ Invite People

Inventory Management...

+ Add task

All tasks

Filter

Sort

Rules

Apps

Fields

...

Task name	Assignee	Due date	Priority	Status	
▼ To do					
Inventory management system Coding And Development 1 1 1	SG Sourav Gupta	Sep 13 – 19	Medium	On track	
Inventory management system Coding 1 1 1	SG Sourav Gupta	Today – Sep 19	Medium	At risk	
Add task...					
▼ Doing					
Requirement specification 1	an ananssourav...	Sep 10 – Today	High	At risk	
System design 1	an ananssourav...	Today	High	At risk	
Planning, Design & Technology used 1	a ananssourav...	Sep 11 – 15	High	Off track	
Add DBMS 1 1 1	SG Sourav Gupta		High	At risk	
Login system design 1	SG Sourav Gupta	Today	Medium	At risk	
Inventory management system Design 1	SG Sourav Gupta	Sep 10 – Today	High	At risk	
Add task...					
▼ Done					
Introduction & Objective 1	SG Sourav Gupta	Sep 6 – 11	Low	On track	
Project category 1	a ananssourav...	Sep 8 – 12	Medium	At risk	
Calculator App 1	a ananssourav...	Today	Medium	At risk	

WinCalculatorApp - Microsoft Visual Studio

FILE EDIT VIEW PROJECT BUILD DEBUG TEAM TOOLS TEST ARCHITECTURE ANALYZE WINDOW HELP

Start

Debug

Quick Launch (Ctrl+Q)

Sign in

Form1.cs

WinCalculatorApp.Form1

Form1.Designer.cs

btnClick(object sender, EventArgs e)

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

```

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.Windows.Forms;

namespace WinCalculatorApp
{
    4 references
    public partial class Form1 : Form
    {
        Double resultValue = 0;
        String operationPerformed = "";
        bool isOperationPerformed = false;

        1 reference
        public Form1()
        {
            InitializeComponent();
        }

        11 references
        private void btnClick(object sender, EventArgs e)
        {
            if ((txtDisplay.Text == "0") || (isOperationPerformed))
                txtDisplay.Clear();
        }
    }
}

```

Solution Explorer

Solution 'WinCalcula...

WinCalculatorA...

Properties

References

App.config

Form1.cs

Form1.De...

Form1.res

Form1

Program.cs

Properties

Output

Show output from: Build

Server Explorer

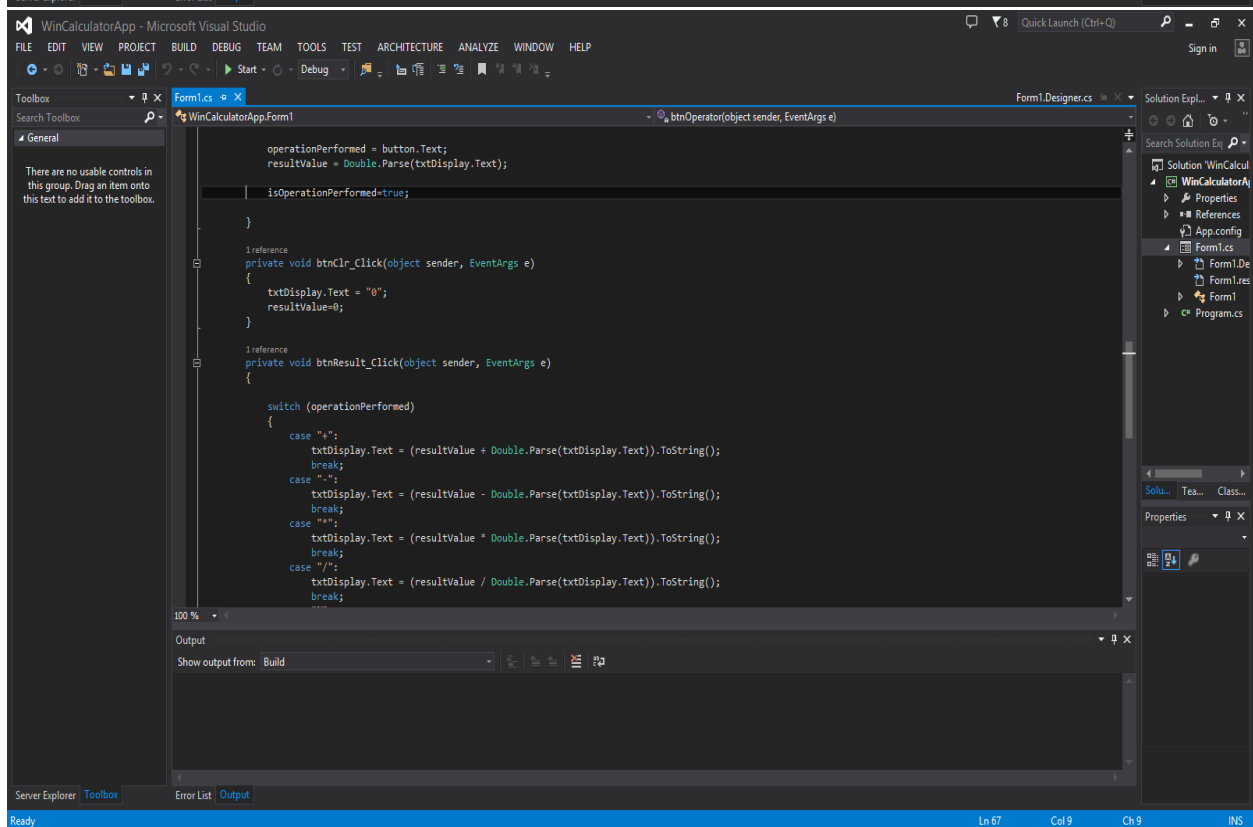
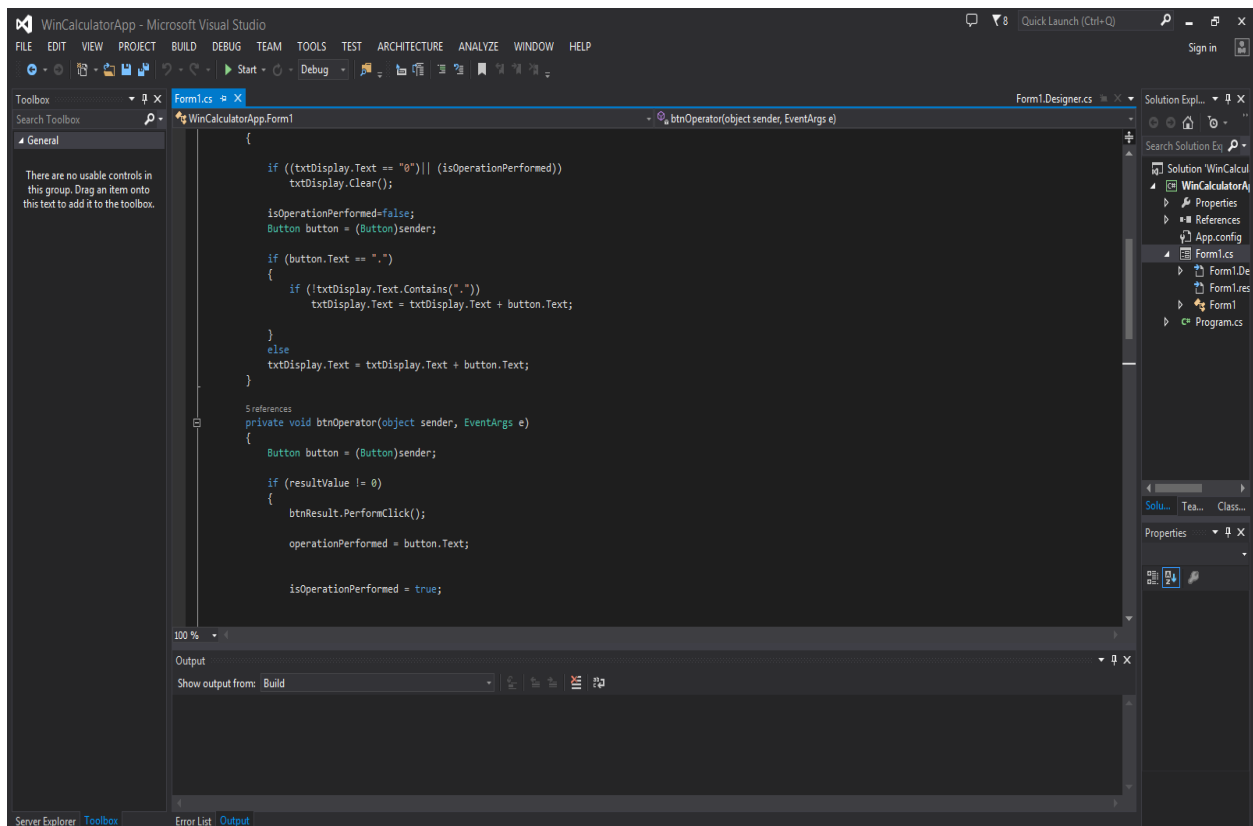
Toolbox

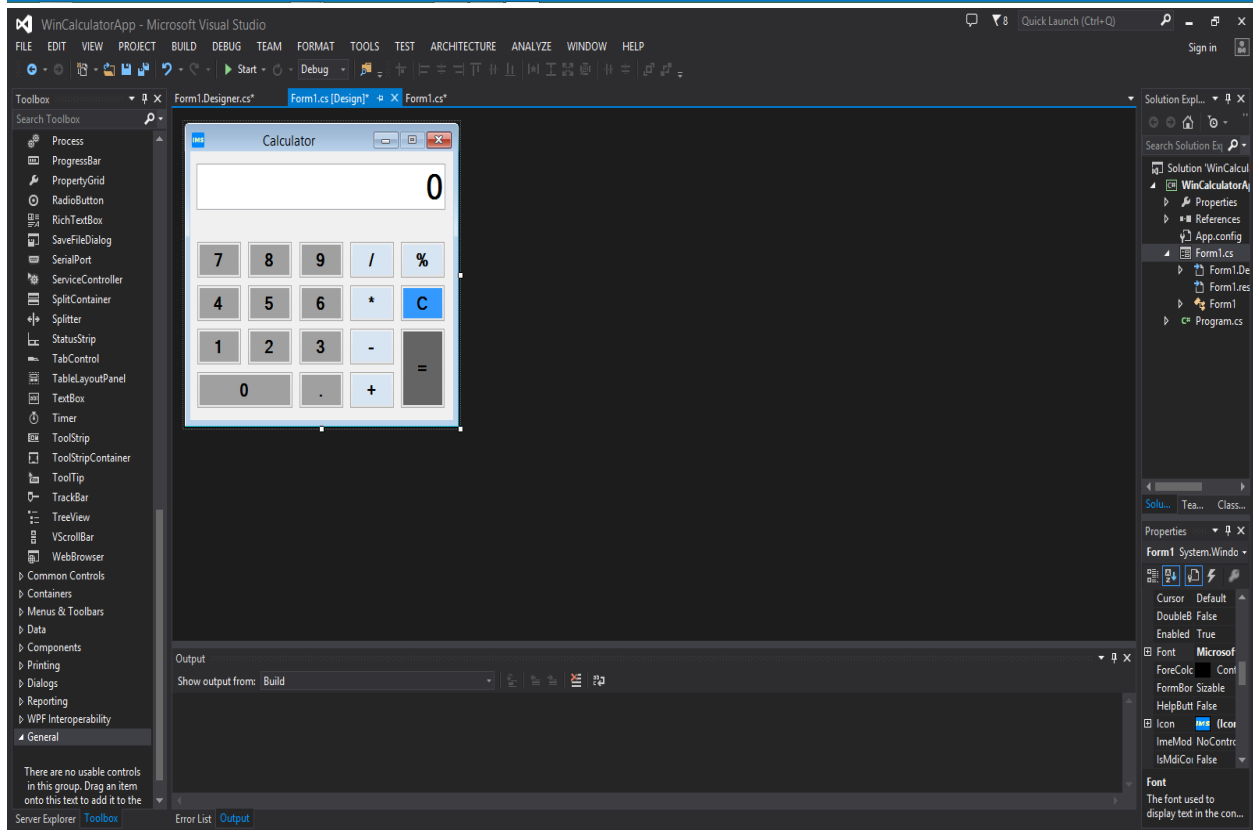
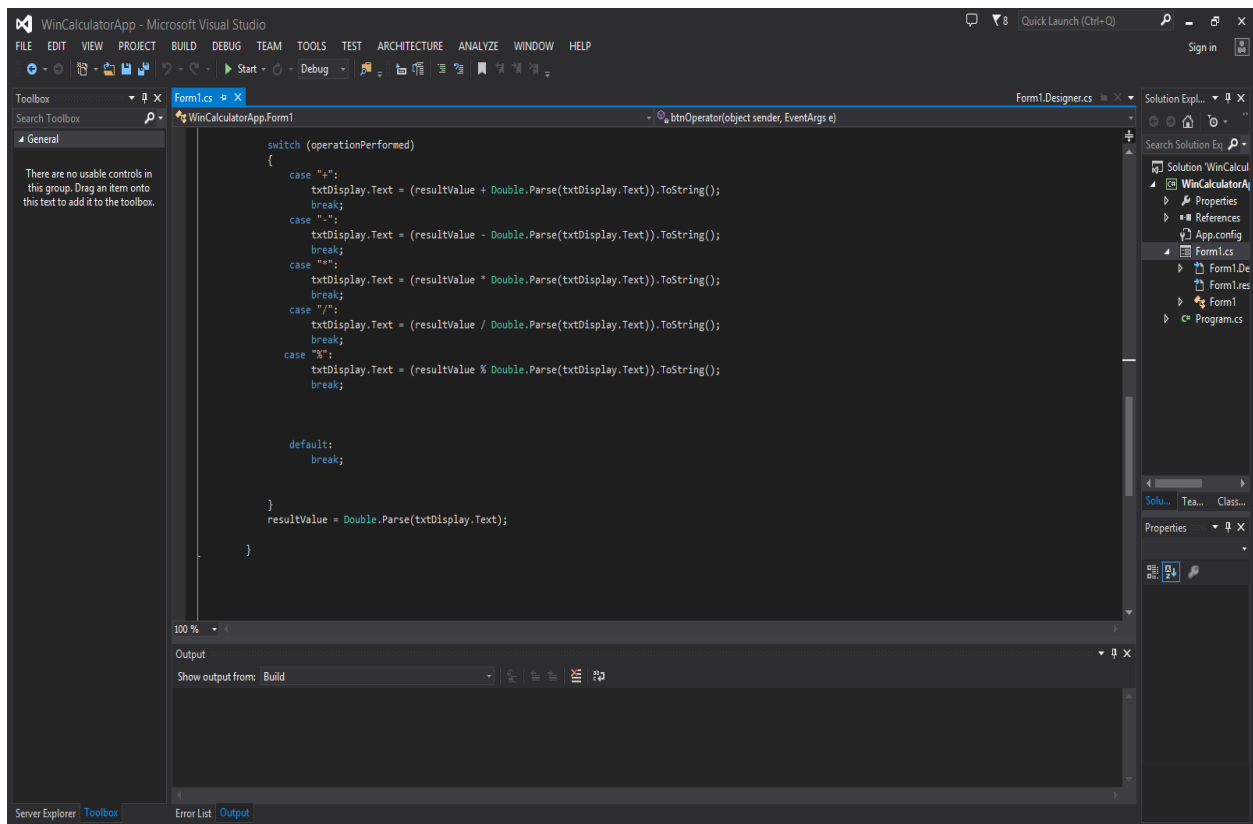
Error List

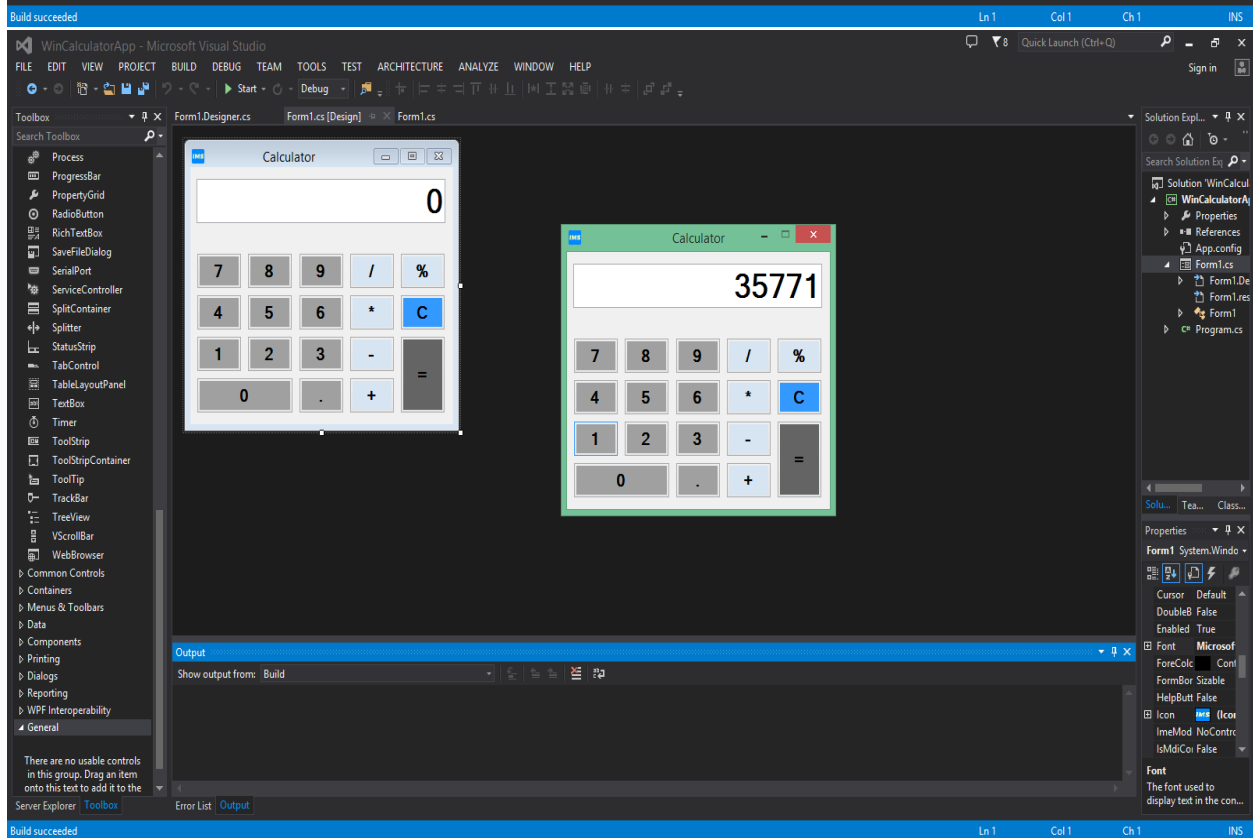
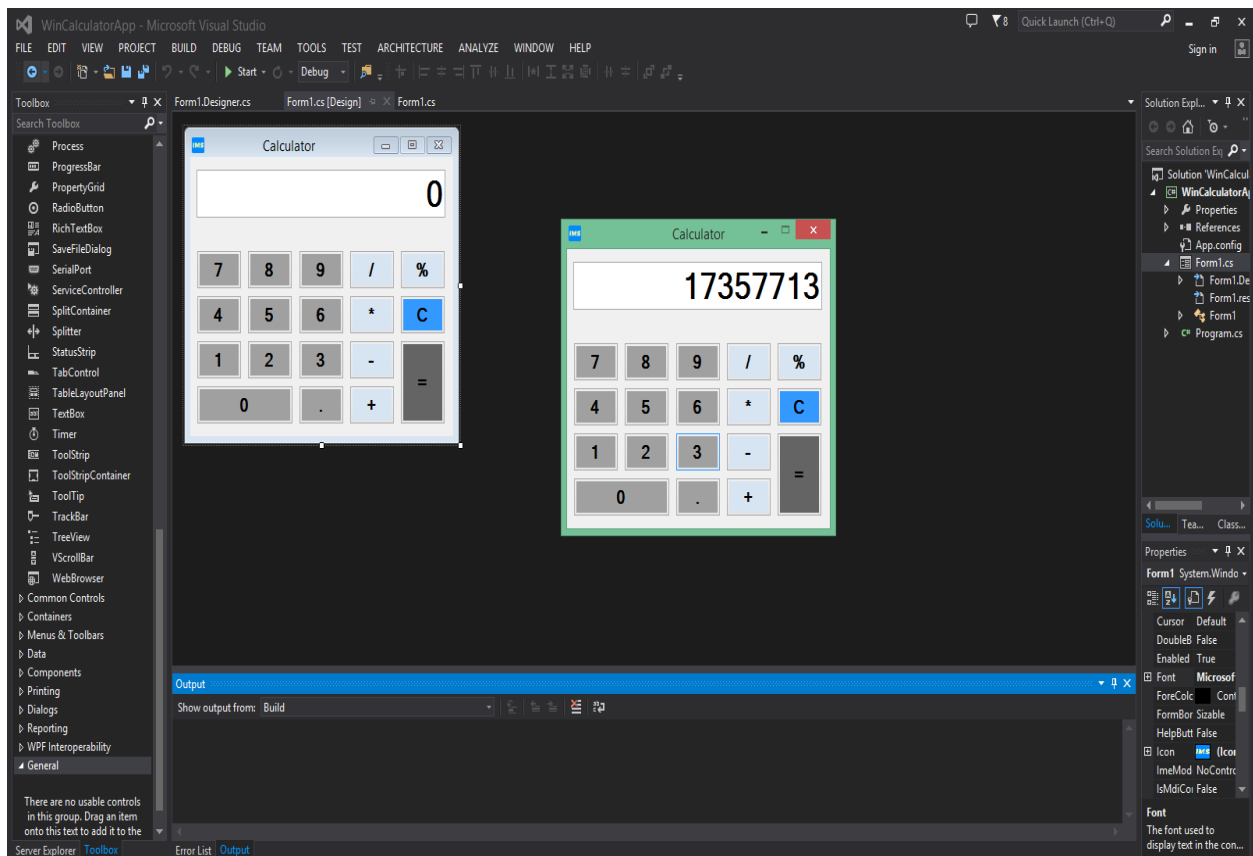
Output

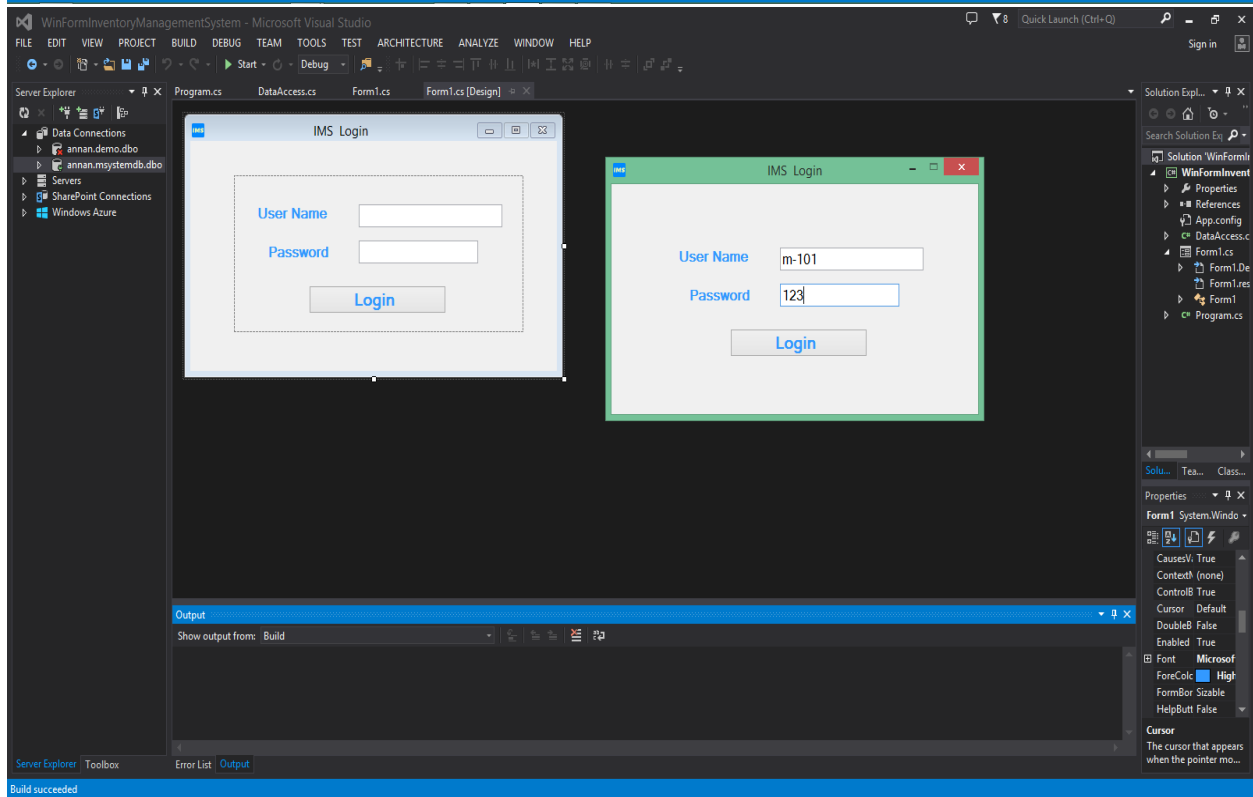
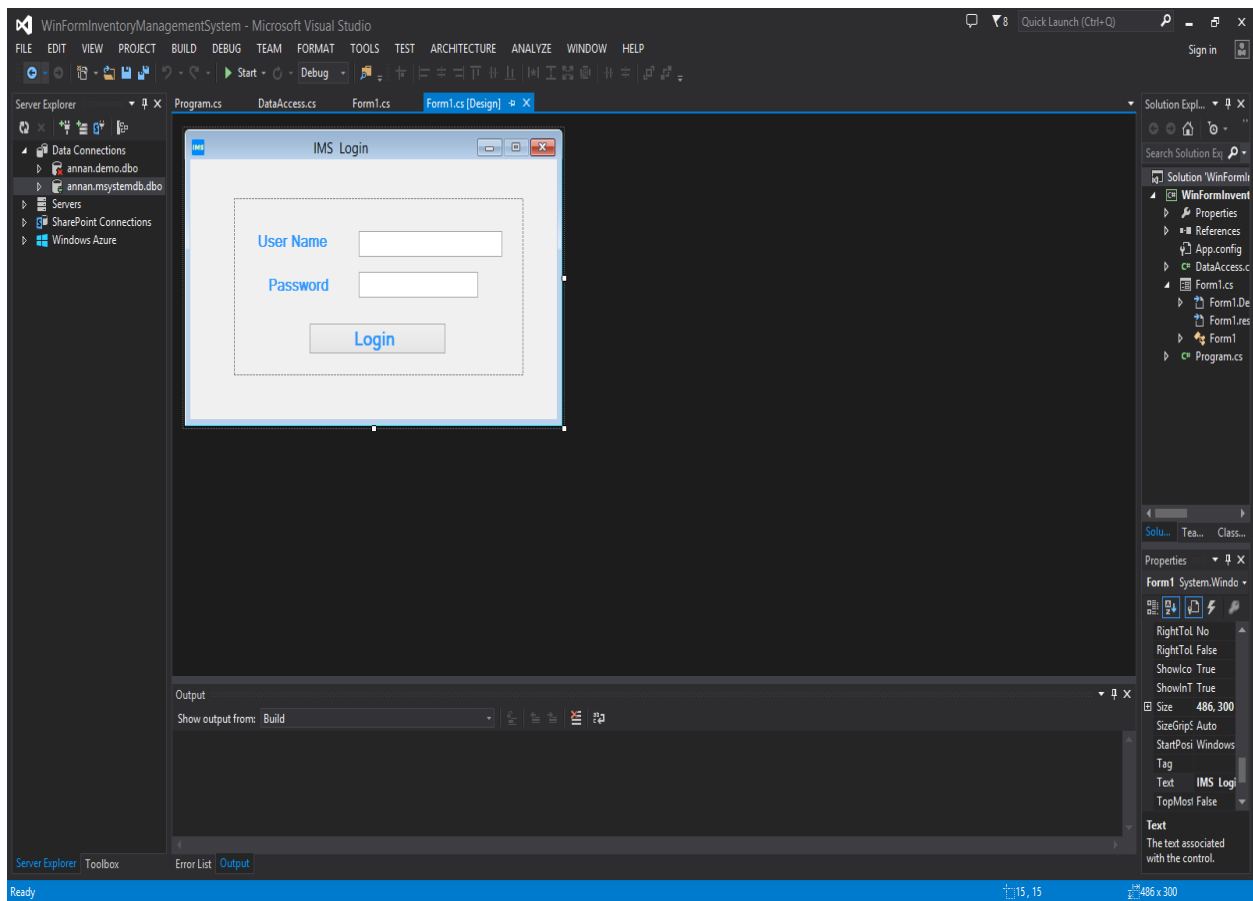
Ready

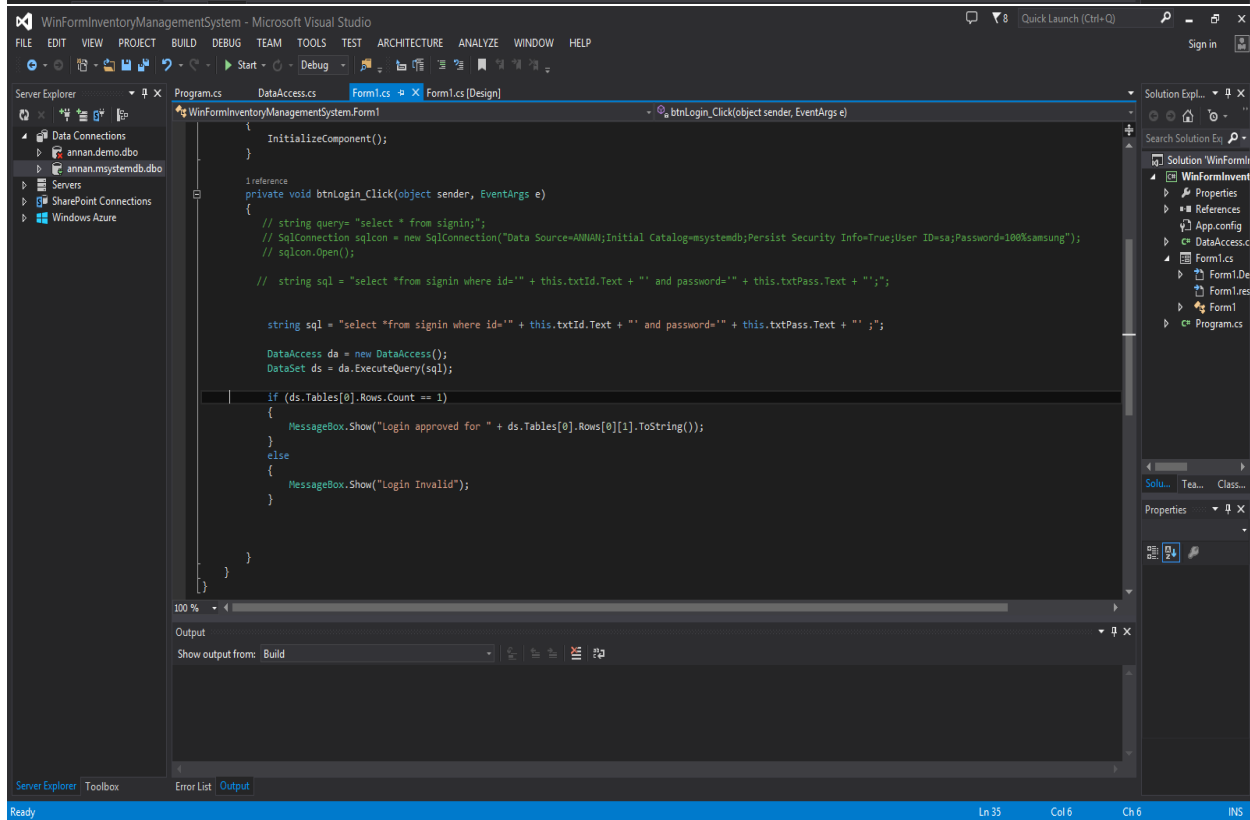
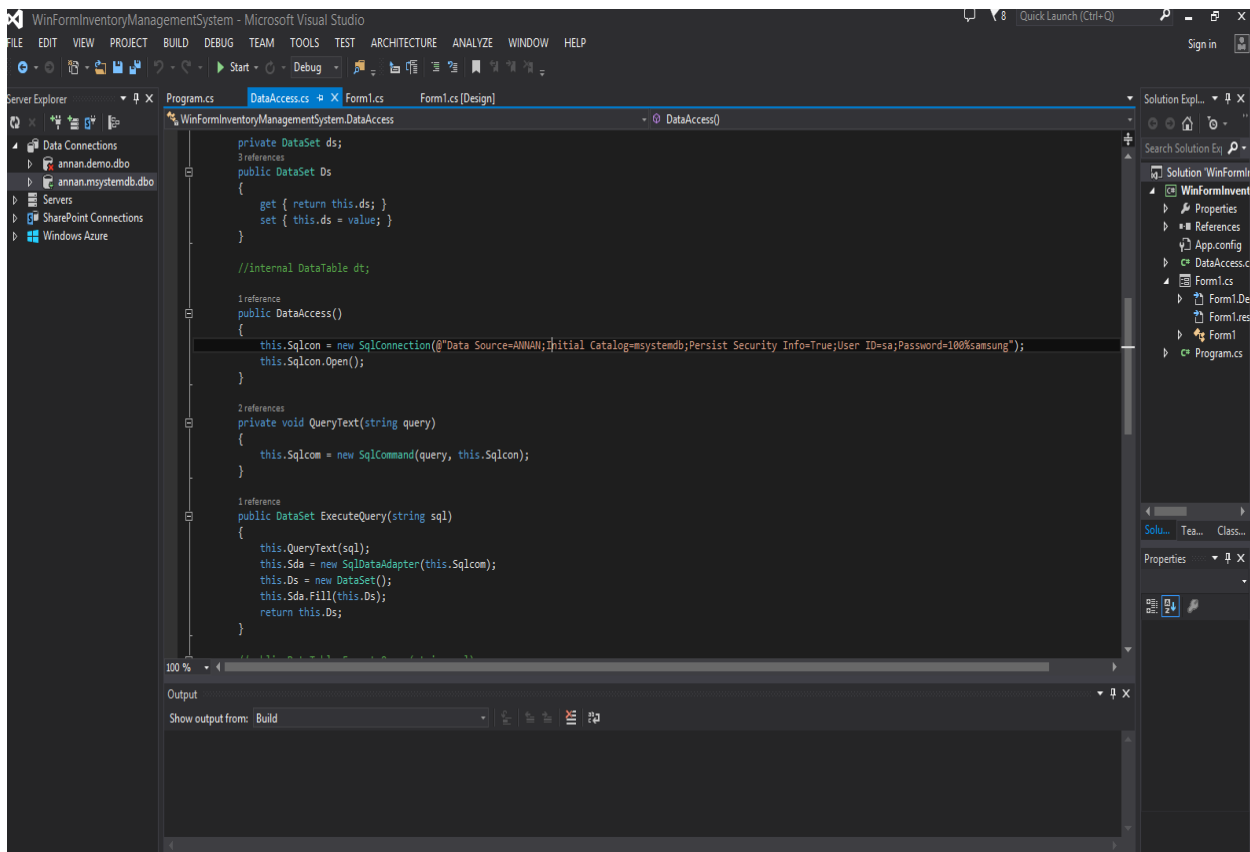
Ln 26 Col 58 Ch 58 INS

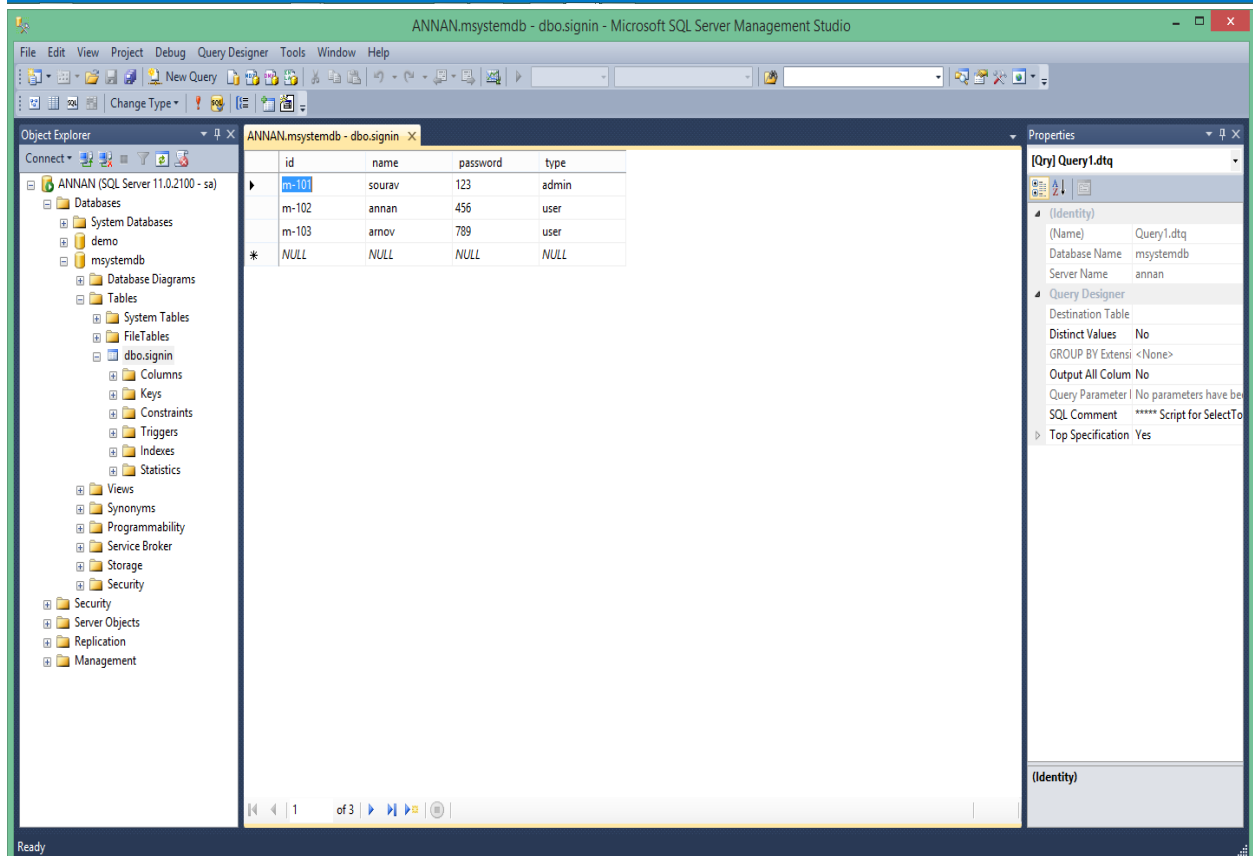
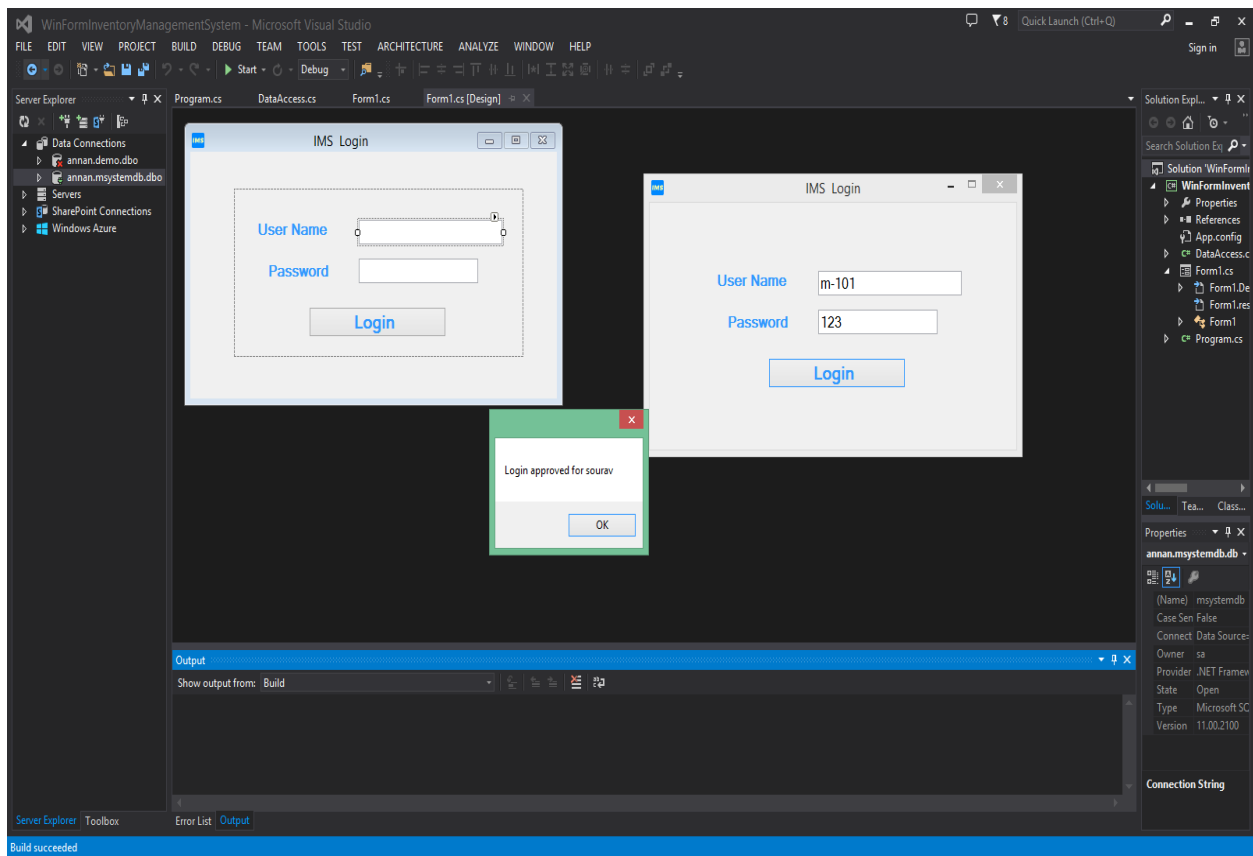












Product ID

p-111

Salesman ID

m-103

Product Name

Version

Quantity

Price

Insertdate

2020-09-22

Category

Update

Save

Refresh

Delete

Logout

Place order

Search

Show details

	Product ID	Product Name	Version	Quantity	Price	Insert date	Category
▶	p-101	hp-laptop	core i3	10	35000	9/16/2020	laptop ...
	p-102	dell inspiron 15	core i5	15	38000	9/17/2020	lapktop ...
	p-103	dell	core i5	12	41000	9/18/2020	desktop ...
	p-104	hp-104	core	5	35000	9/19/2020	laptop ...
	p-105	hp-15	core i3	19	44000	9/19/2020	printer ...
	p-106	hp-10	core	17	42000	9/19/2020	desktop ...
	p-107	dell	core	6	54000	9/20/2020	desktop ...
	p-108	hp	core	2	58000	9/19/2020	laptop ...

Product ID

s-144

Product ID

s-144

Laptop

2

Laptop

2

Desktop

0

Desktop

0

Printer

1

Printer

1

Pendrive

0

Pendrive

0

Order date

2020-09-22

Order date

2020-09-22

Price

85000

Price

85000

Discount

0

Discount

0

Total Price

85000

Total Price

85000

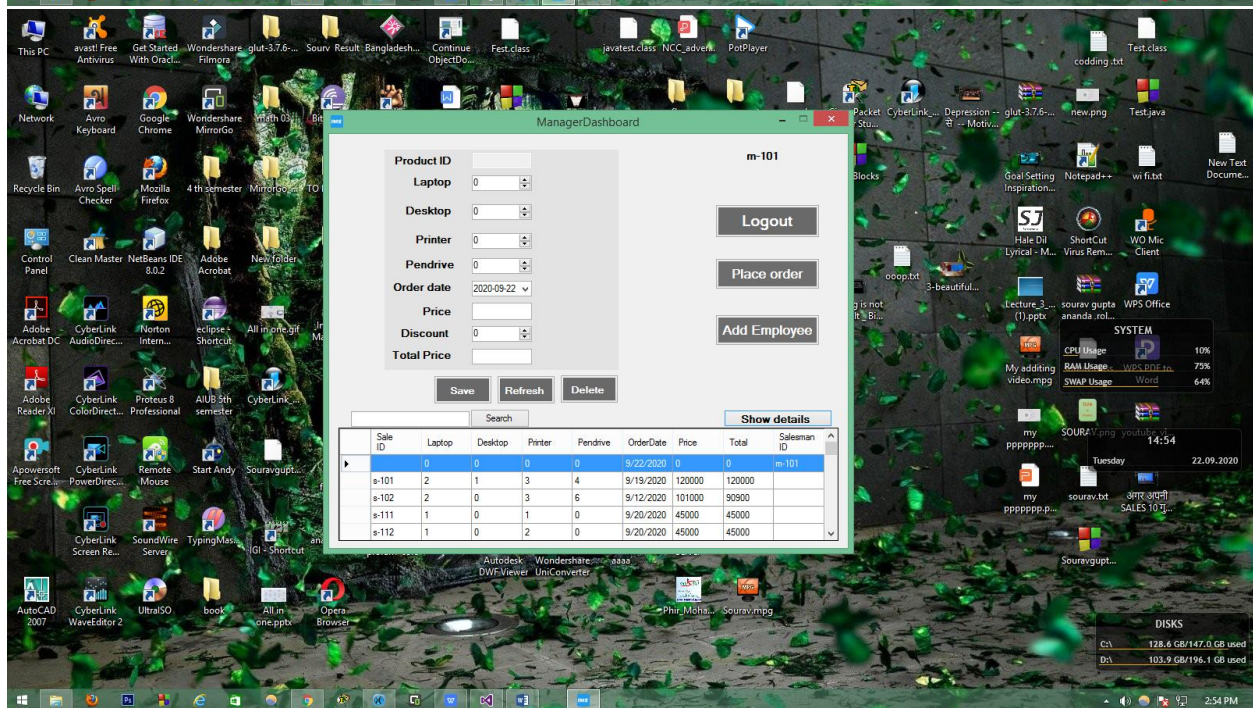
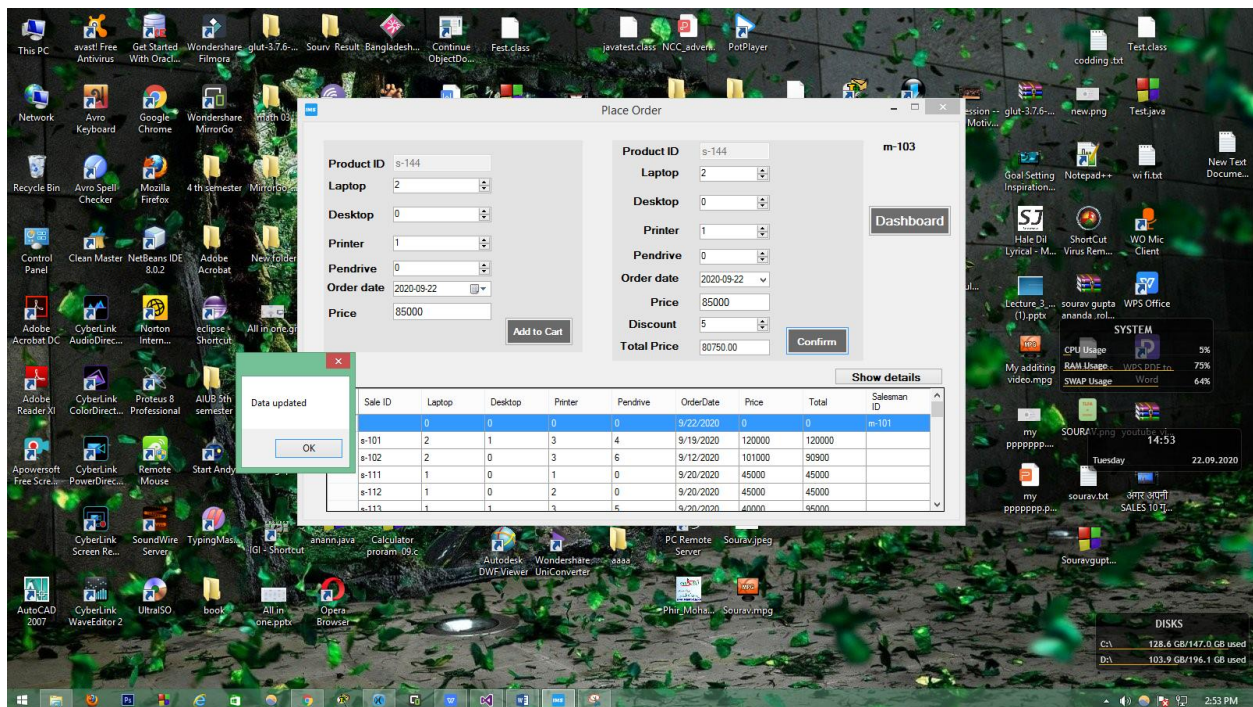
Add to Cart

Confirm

Dashboard

Show details

	Sale ID	Laptop	Desktop	Printer	Pendrive	OrderDate	Price	Total	Salesman ID
▶	s-101	2	1	3	4	9/19/2020	120000	120000	m-101
	s-102	2	0	3	6	9/12/2020	101000	90900	
	s-111	1	0	1	0	9/20/2020	45000	45000	
	s-112	1	0	2	0	9/20/2020	45000	45000	
	s-113	1	1	1	5	9/20/2020	40000	95000	



WinFormInventoryManagementSystem - Microsoft Visual Studio

FILE EDIT VIEW PROJECT BUILD DEBUG TEAM TOOLS TEST ARCHITECTURE ANALYZE WINDOW HELP

Server Explorer: Data Connections (annan.demo.dbo, annan.msystemdb.dbo), Tables (ordersale, sid, laptop, desktop, printer, pendrive, price, orderDate, total, salesmanid, product, signin, Views, Stored Procedures, Functions, Synonyms, Types, Assemblies), Servers (SharePoint Connections, Windows Azure).

Solution Explorer: WinFormInventoryManagementSystem (Properties, References, AddEmployee.cs, DataAccess.cs, Form1.cs, lmsDashboard.cs, ManagerDashboard.cs, PlaceOrder.cs, Program.cs).

Form1.cs Code:

```

namespace WinFormInventoryManagementSystem
{
    9 references
    public partial class Form1 : Form
    {
        1 reference
        public Form1()
        {
            InitializeComponent();
        }
        1 reference
        private void btnLogin_Click(object sender, EventArgs e)
        {
            try
            {
                string sql = "select *from signin where id = " + txtId.Text;
                DataAccess da = new DataAccess();
                DataSet ds = da.ExecuteQuery(sql);

                if (ds.Tables[0].Rows.Count == 1)
                {
                    MessageBox.Show("Login approved for " + txtId.Text);
                }
            }
            catch { }
        }
    }
}

```

Output: Show output from: Build

AddEmployee Form:

Salesman ID: m-106
 Salesman Name:
 Password:
 Type:
 Insert date: 2020-09-22
 Salary:
 Buttons: Save, Refresh, Delete

Search Name:
 Show details

ID	Name	Password	Type	Joining Date	Salary
m-101	sourav	123	Manager	9/2/2020	100000
m-103	anov	789	Salesman	9/2/2020	55000
m-104	aaf	987	Salesman	9/21/2020	25000
m-105	anann	456	Salesman	9/21/2020	40000

WinFormInventoryManagementSystem - Microsoft Visual Studio

FILE EDIT VIEW PROJECT BUILD DEBUG TEAM TOOLS TEST ARCHITECTURE ANALYZE WINDOW HELP

Server Explorer: Data Connections (annan.demo.dbo, annan.msystemdb.dbo), Tables (ordersale, sid, laptop, desktop, printer, pendrive, price, orderDate, total, salesmanid, product, pid, pname, version, quantity, price, insertdate, category, signin, id, name, password, type, joiningDate, salary, Views, Stored Procedures, Functions, Synonyms, Types, Assemblies), Servers (SharePoint Connections, Windows Azure).

Solution Explorer: WinFormInventoryManagementSystem (Properties, References, AddEmployee.cs, DataAccess.cs, Form1.cs, lmsDashboard.cs, ManagerDashboard.cs, PlaceOrder.cs, Program.cs).

Form1.cs Code:

```

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{
    9 references
    public partial class Form1 : Form
    {
        1 reference
        public Form1()
        {
            InitializeComponent();
        }
        1 reference
        private void btnLogin_Click(object sender, EventArgs e)
        {
            try
            {
                string sql = "select *from signin where id = " + txtId.Text;
                DataAccess da = new DataAccess();
                DataSet ds = da.ExecuteQuery(sql);

                if (ds.Tables[0].Rows.Count == 1)
                {
                    MessageBox.Show("Login approved for " + txtId.Text);
                }
            }
            catch { }
        }
    }
}

```

Output: Show output from: Build

PlaceOrderMd Form:

m-101

Product Price

Laptop =40000
 Desktop =40000
 Printer =5000
 Pendrive =1000

Product ID: s-145
 Laptop: 0
 Desktop: 0
 Printer: 0
 Pendrive: 0
 Order date: 2020-09-22
 Price:
 Discount: 0
 Total Price:
 Buttons: Add to Cart, Confirm

Search:
 Show details

Sale ID	Laptop	Desktop	Printer	Pendrive	OrderDate	Price	Total	Salesman ID
s-101	2	1	3	4	9/19/2020	120000	120000	m-101
s-102	2	0	3	6	9/12/2020	101000	90900	
s-111	1	0	1	0	9/20/2020	45000	45000	
s-112	1	0	2	0	9/20/2020	45000	45000	

Properties: laptop Column (Name: laptop, Data Type: int, Identity Increment: 0, Identity Seed: 0, Is Identity: False, Length: 4, Nullable: True, Precision: 10, Scale: 0)

Thank you Sir!