CRM SYSTEM

Project Report



IS204.3 Enterprise System Lecturer:Mrs.Chalani Oruthotaarachchi Group M



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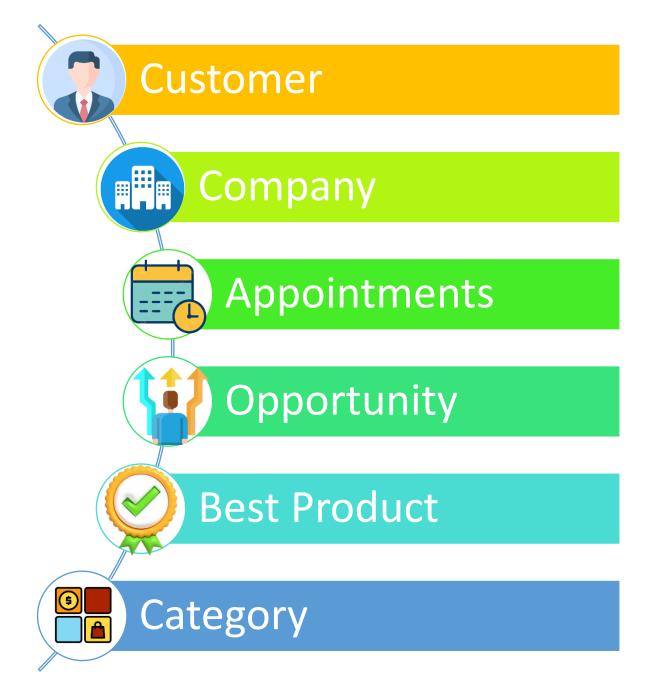
01. SYSTEM INTRODUCTION

RM system, or Customer Relationship Management system, is a powerful tool that allows businesses to manage their interactions with customers and prospects. It provides a centralized database to store customer information and allows businesses to track and analyze customer interactions and behavior over time. By providing a comprehensive view of the customer, a CRM system can help businesses better understand and meet their customers' needs, improve customer satisfaction, and ultimately drive sales and revenue growth. A CRM system can also help businesses streamline their internal processes, automate tasks, and improve communication across teams. Overall, a CRM system is an essential tool for businesses looking to build and maintain strong relationships with their customers.

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O2. MAIN TYPE OF FUNCTION IN THE SYSTEM





O3. IDENTIFICATION OF THE SYSTEM FUNCTIONS

- ❖ User The person who used the CRM system. The user has done every task in this system. He enters every data to the system.
- **customer** The owners of the companies. This system can be used by many companies, so that many customers have in this system. In this system the customer can get appointments from the user and the user gives appointments to the customer.
- Company The organizations who buy goods or services from the users.
- ❖ Appointments In this function, the company or customer fixes the date with users for an important thing.

Example-: special meeting

New product discussions

Discussion of the product quality

Opportunity — Opportunity is created for users by companies or customers.

Examples-: if there two companies order same products, one of those companies.

❖ Best product — It's included recommended ideas according to the company side.

Example-: product ranges

Category — Thats can be used for any types of fields, such as transportation, health field, agricultural field etc.



04. How we build the system

- ✓ First, we discussed the system that we are going to build from ERP, SCM, CRM, KM, then we selected to build a CRM system.
- ✓ Next, we designed rough sketches of UI interfaces. Then we started to design UI and cording part of UI's, using visual studio software,
- ✓ Then we use SQL server to store our data, we store data
 as well as retrieve data through this server but it's difficult
 to deal with server, so we decided to make database
 tables by using SQL server management studio.
- ✓ Finally, we used software such as visual studio, SQL server, SQL server management studio to build this CRM system.



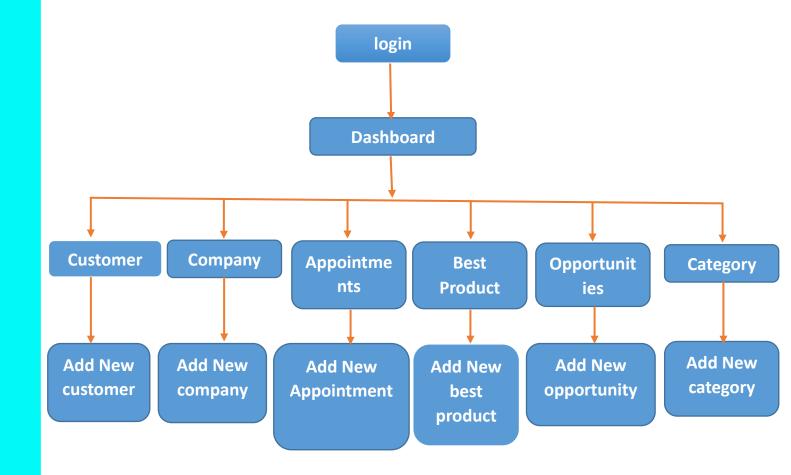








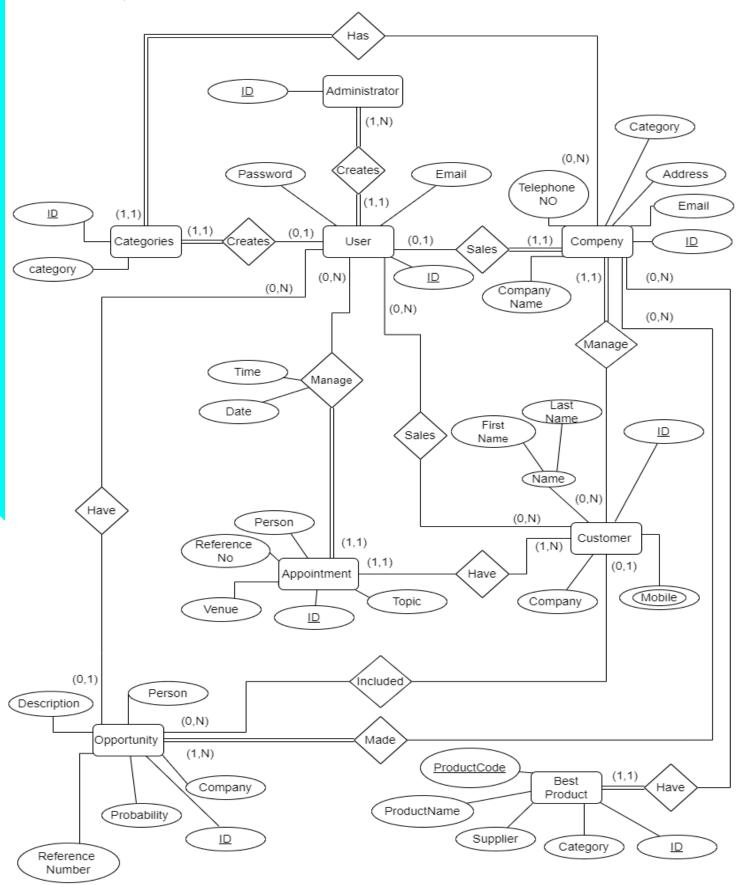
05. FLOW OF THE SYSTEM





06. DIAGRAMS

I. ER-DIAGRAM



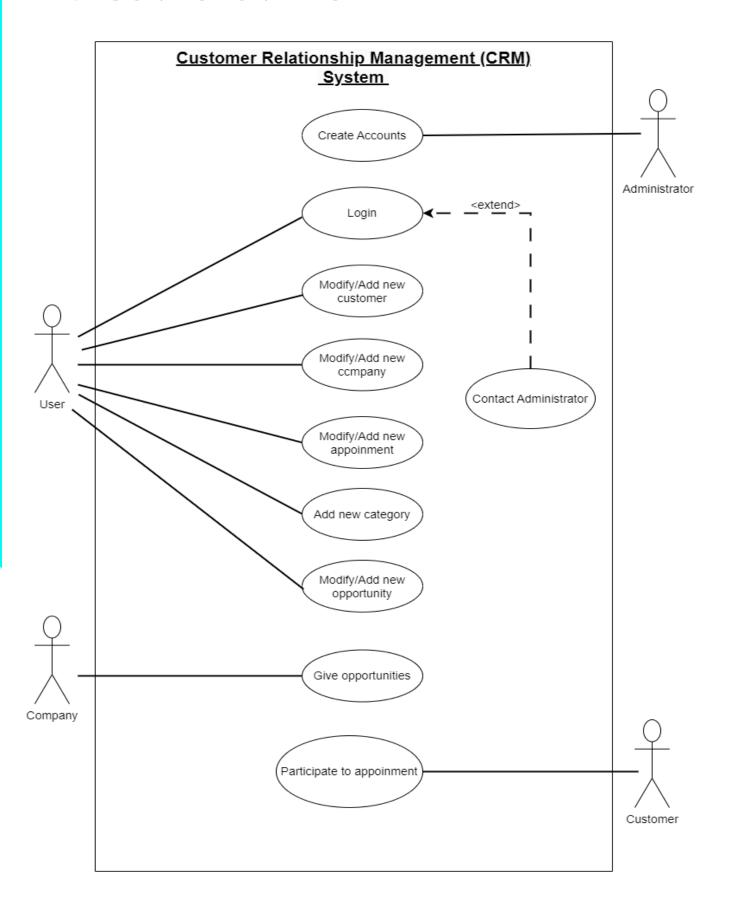


ASSUMPTIONS

- If we sell a product, we act as a user in this CRM System.
- If the user doesn't have an account in this CRM System, the user can contact the administrator and create an account.
- In the category function, we create a new category, and each category uses in the company.
- In the company function, the company name includes use in the customer function.
- In the customer function, the first name that includes is used as a person in the appointment function.

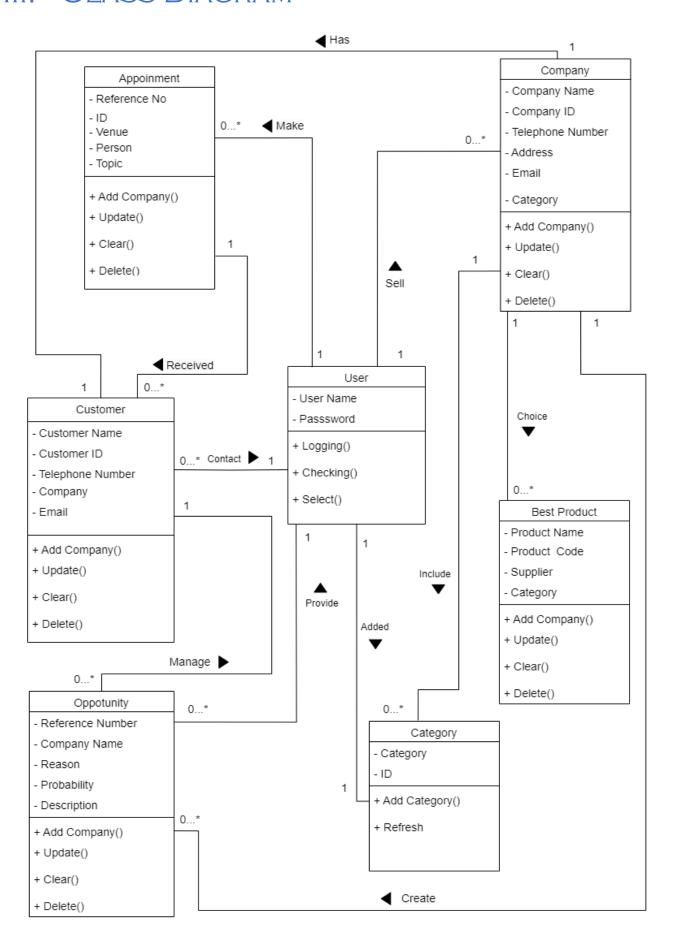


II. USER CASE DIAGRAM





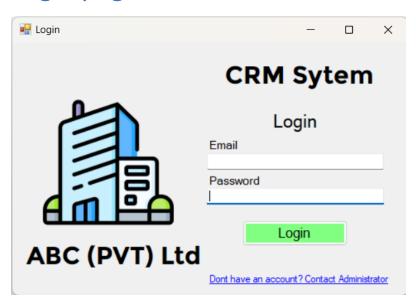
III. CLASS DIAGRAM





07. USER INTERFACES DESIGNS

Login page



In this page user can login to the system using their password and mail. First of all, users want to create an account for this system by contacting the Administrator.

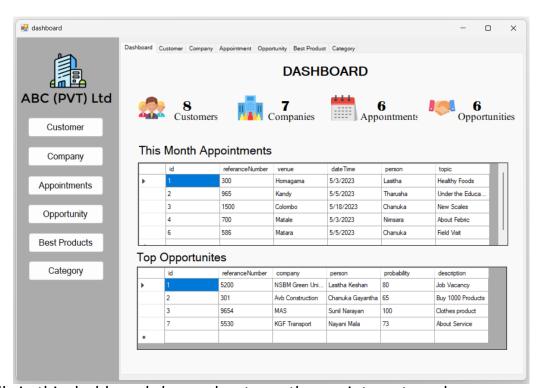
Dashboard

in using email and password. Then display this dashboard. In this dashboard we can select any functions. It shows, how many customers, companies,

appointments, and

Opportunities in

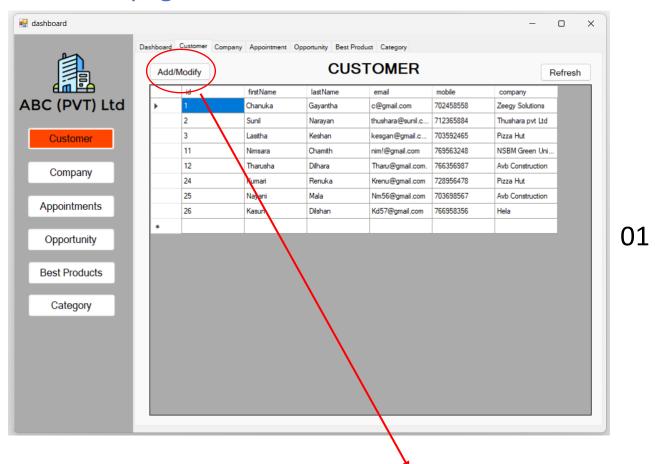
When the user logs



their system. Specially in this dashboard shows about month appointments and Top opportunities. It is very helpful for the users.



Customer page



In this page every customer's detail shows. If we want to add a new customer to the system, then we need to go to the add or modify button. After that we can see the second user interface. In this user Interface we can add new customer, update, Delete and clear customer details.

Add New Customer

ID

First Name

Last Name

Email

Mobile

Company

Add Company

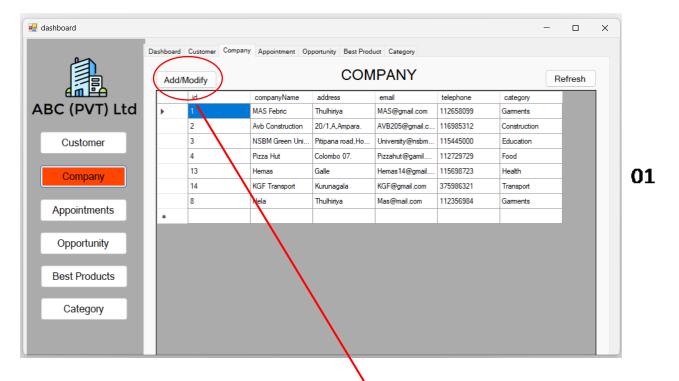
Clear

Update

Delete



Company page



In this page every company's detail shows. If we want to add a new company to the system, then we need to go to the add or modify button. After that we can see the second user interface. In this user Interface we can add new company, update, Delete and clear company details.

Add New Company

ID

Company Name

Address

Email

Telephone

Categoty

Add Company

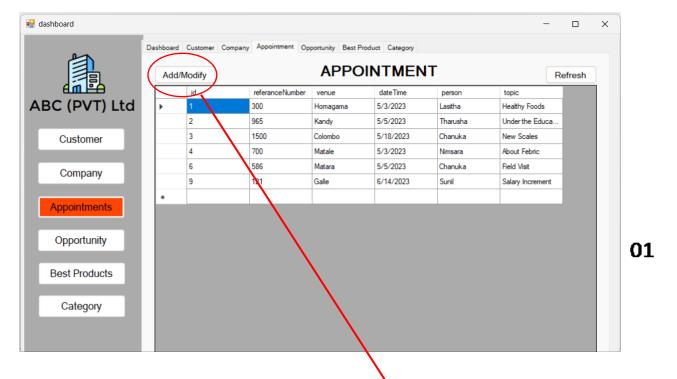
Clear

Update

Delete



Appointment page

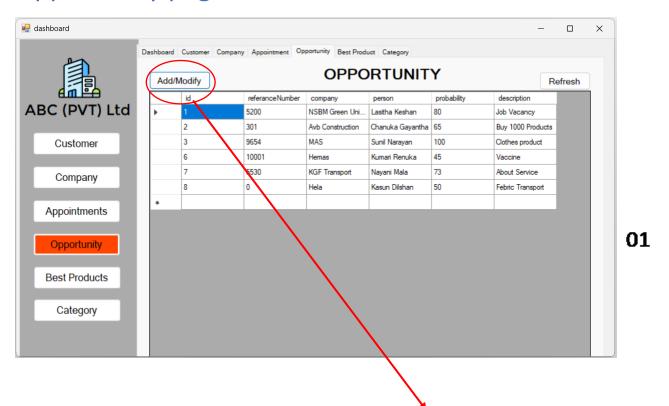


In this page every appointment's detail shows. If we want to add a new appointment to the system, then we need to go to the add or modify button. After that we can see the second user interface. In this user Interface we can add new appointment, update, Delete and clear customer details.

Every month appointments are shown on the dashboard. It is very useful to the system users. new_appointment X Add New Appointment Reference Number Venue Date Time Friday 5, 2023 • Person Topic Add Clear Update Delete



Opportunity page



In this page every opportunity's detail shows. If we want to add a new opportunity to the system, then we need to go to the add or modify button. After that we can see the second user interface. In this user Interface we can add new opportunity, update, Delete and clear customer details.

Top opportunity is shown on the dashboard.

Add New Opportunity

ID

Reference Number

Company

Person

Probability

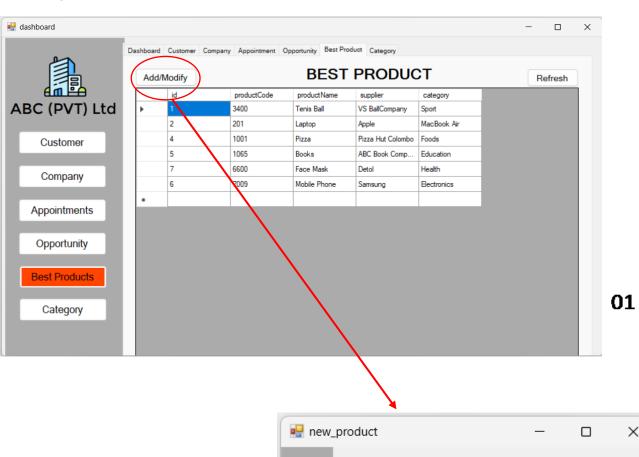
Description

Add Clear

Update Delete



Best product



This page is related to the best products in their company or system. every product's detail shows in this page. If we want to add the best new product to the system, then we need to go to the add or modify button. After that we can see the second user interface. In this user Interface we can add best new product, update, Delete and clear product details.

Add New Product

ID

Product Code

Product name

Supplier

Category

Add Product

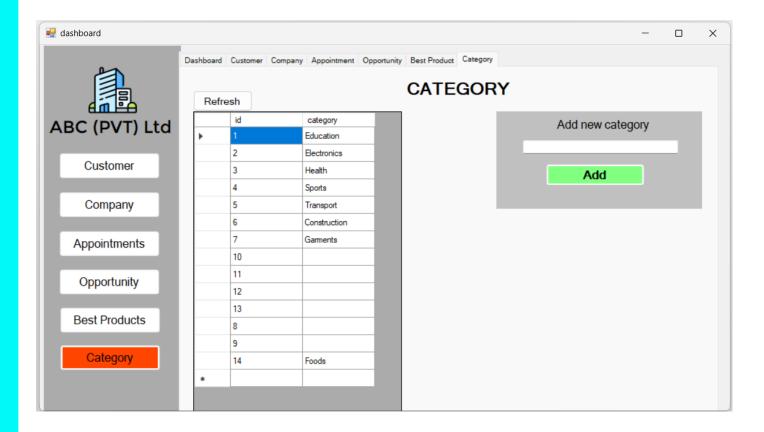
Clear

Update

Delete



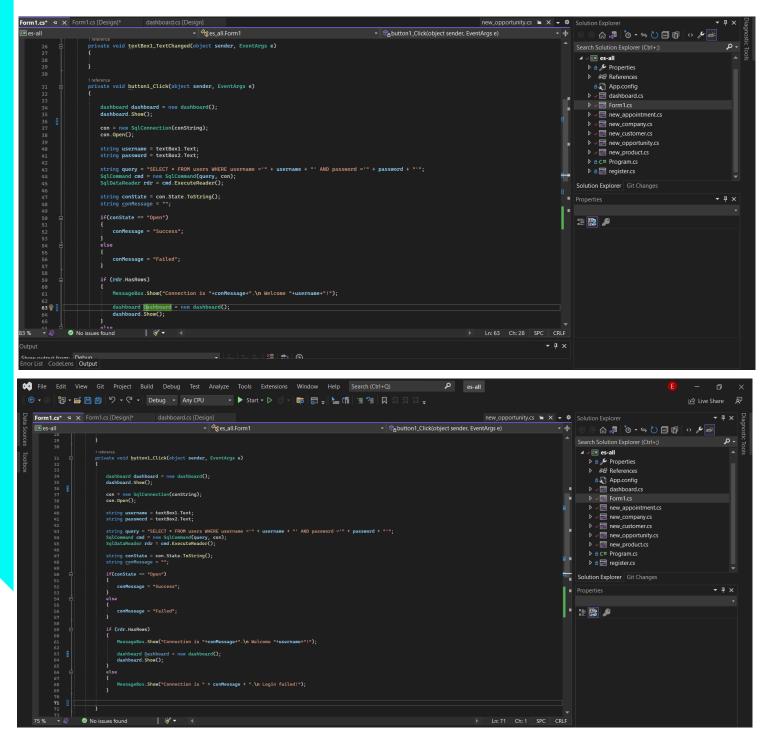
Category



This CRM system we used in business. So, there are so many categories of products or services. This page is used for filling out all the details about categories that chosen product and services. When we add the company to the system, we can choose what categories are going on.



08. SYSTEM BACK-END





```
Data
    dashboard.cs + X Form1.cs*
                                            Form1.cs [Design]*
                                                                       dashboard.cs [Design]
                                                                     es_all.dashboard
    ©# es-all
                          private void dashboard_Load(object sender, EventArgs e)
loolbox
                              con = new SqlConnection(conString);
           780
                              con.Open();
                              SqlCommand customerCountQ = new SqlCommand("SELECT * FROM customer", con);
                              SqlDataReader customerRead = customerCountQ.ExecuteReader();
                               int customerCount = 0;
                              while (customerRead.Read())
                                  customerCount++;
                              label13.Text = "";
                              label13.Text = customerCount.ToString();
                              customerRead.Close();
                              SqlCommand companyCountQ = new SqlCommand("SELECT * FROM company", con);
                              SqlDataReader companyRead = companyCountQ.ExecuteReader();
                               int companyCount = 0;
                              while (companyRead.Read())
          104
                                   companyCount++;
                               label14.Text = "";
                              label14.Text = companyCount.ToString();
                              companyRead.Close();
                              SqlCommand appointmentCountQ = new SqlCommand("SELECT * FROM appointment", con);
                               SqlDataReader appointmentRead = appointmentCountQ.ExecuteReader();
```



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dashboard.cs + X Form1.cs*
                                                    Form1.cs [Design]*
                                                                                    dashboard.cs [Design]
                                                                               → %es_all.dashboard
    C# es-all
                                    int appointmentCount = 0;
                                    while (appointmentRead.Read())
loolbox
                                         appointmentCount++;
                                    label15.Text = "";
                                    label15.Text = appointmentCount.ToString();
                                    appointmentRead.Close():
                                    SqlCommand opportunityCountQ = new SqlCommand("SELECT * FROM opportunity", con);
                                    SqlDataReader opportunityRead = opportunityCountQ.ExecuteReader();
                                    int opportunityCount = 0;
                                    while (opportunityRead.Read())
                                         opportunityCount++;
                                    label16.Text = "";
                                    label16.Text = opportunityCount.ToString();
                                    opportunityRead.Close();
                                    //This moth appointments
                                    string currentMonth = DateTime.Now.ToString("MM",CultureInfo.InvariantCulture);
                                    string thisAppoQueary = $"SELECT * FROM appointment WHERE MONTH(dateTime) ={currentMonth} ";
                                    SqlCommand loadThisAppointment = new SqlCommand(thisAppoQueary, con);
                                    SqlDataAdapter thisAppointmentAdapter = new SqlDataAdapter(loadThisAppointment);
                                    DataSet thisAppointmentDataSet = new DataSet();
                                    thisAppointmentAdapter.Fill(thisAppointmentDataSet);
                                    dataGridView7.DataSource = thisAppointmentDataSet.Tables[0];
     dashboard.cs + X Form1.cs*
                                                 Form1.cs [Design]*
                                                                               dashboard.cs [Design]
                                                                          C# es-all
                                                                                                                                                  string topOppotunities = $"SELECT * FROM opportunity WHERE probability > 50";
SqlCommand loadtopOppotunities = new SqlCommand(topOppotunities, con);
SqlDataAdapter topopportunityAdapter = new SqlDataAdapter(loadtopOppotunities);
DataSet topoppertunityDataset = new DataSet();
                                  topopportunityAdapter.Fill(topoppertunityDataset);
                                   dataGridView8.DataSource = topoppertunityDataset.Tables[0];
                                   //End dashboad
                                  SqlCommand loadCustomers = new SqlCommand(customerQuery, con);
                                  SqlDataAdapter customerAdapter = new SqlDataAdapter(loadCustomers);
DataSet customerDataSet= new DataSet();
                                  customerAdapter.Fill(customerDataSet);
                                   dataGridView1.DataSource= customerDataSet.Tables[0];
                                   SqlCommand loadCategories = new SqlCommand(catQuery, con);
                                   SqlDataAdapter catAdapter = new SqlDataAdapter(loadCategories);
                                  DataSet catDataSet= new DataSet();
                                  catAdapter.Fill(catDataSet):
                                  dataGridView2.DataSource= catDataSet.Tables[0];
                                  SqlCommand loadCompany = new SqlCommand(companyQuery, con);
SqlDataAdapter companyAdapter = new SqlDataAdapter(loadCompany);
                                  DataSet companyDataSet= new DataSet();
                                   companyAdapter.Fill(companyDataSet);
                                  dataGridView3.DataSource = companyDataSet.Tables[0];
                                  SqlCommand loadAppointment = new SqlCommand(appoQueary, con);
SqlDataAdapter appointmentAdapter = new SqlDataAdapter(loadAppointment);
                                   DataSet appointmentDataSet= new DataSet();
                                   appointmentAdapter.Fill(appointmentDataSet);
```

dataGridView4.DataSource = appointmentDataSet.Tables[0];



```
SqlCommand loadoppertunity = new SqlCommand(opportunityQueary, con);
    SqlDataAdapter opportunityAdapter = new SqlDataAdapter(loadoppertunity);
    DataSet oppertunityDataset = new DataSet();
    opportunityAdapter.Fill(oppertunityDataset);
    dataGridView5.DataSource = oppertunityDataset.Tables[0];
    SqlCommand loadproduct = new SqlCommand(productQueary, con);
   SqlDataAdapter productAdapter = new SqlDataAdapter(loadproduct);
DataSet productDataset = new DataSet();
    productAdapter.Fill(productDataset);
    dataGridView6.DataSource = productDataset.Tables[0];
private void button1_Click_1(object sender, EventArgs e)
    tabControl1.SelectedIndex = 1;
    button1.BackColor = Color.OrangeRed;
    button2.BackColor = Color.White;
    button3.BackColor = Color.White;
    button4.BackColor = Color.White
    button5.BackColor = Color.White;
   button6.BackColor = Color.White;
private void button2_Click(object sender, EventArgs e)
    tabControl1.SelectedIndex = 2;
    button1.BackColor = Color.White;
    button2.BackColor = Color.OrangeRed;
    button3.BackColor = Color.White;
    button4.BackColor = Color.White;
    button5.BackColor = Color.White
    button6.BackColor = Color.White;
```

```
private void button3_Click(object sender, EventArgs e)
   tabControl1.SelectedIndex = 3;
   button1.BackColor = Color.White:
   button2.BackColor = Color.White;
   button3.BackColor = Color.OrangeRed;
   button4.BackColor = Color.White;
   button5.BackColor = Color.White;
   button6.BackColor = Color.White;
1
private void button4_Click(object sender, EventArgs e)
   tabControl1.SelectedIndex = 4;
   button1.BackColor = Color.White;
    button2.BackColor = Color.White;
   button3.BackColor = Color.White;
   button4.BackColor = Color.OrangeRed;
   button5.BackColor = Color.White;
   button6.BackColor = Color.White;
ż
private void button5_Click(object sender, EventArgs e)
    tabControl1.SelectedIndex = 5;
   button1.BackColor = Color.White;
   button2.BackColor = Color.White;
   button3.BackColor = Color.White;
   button4.BackColor = Color.White;
   button5.BackColor = Color.OrangeRed;
   button6.BackColor = Color.White;
ż
private void button6_Click(object sender, EventArgs e)
   tabControl1.SelectedIndex = 6;
    button1.BackColor = Color.White;
    button2.BackColor = Color.White;
    button3.BackColor = Color.White;
    button4.BackColor = Color.White;
    button5.BackColor = Color.White;
    button6.BackColor = Color.OrangeRed;
```



```
private void button6_Click(object sender, EventArgs e)
    tabControl1.SelectedIndex = 6;
    button1.BackColor = Color.White;
    button2.BackColor = Color.White;
    button3.BackColor = Color.White;
    button4.BackColor = Color.White;
    button5.BackColor = Color.White;
    button6.BackColor = Color.OrangeRed;
private void tabControl1_SelectedIndexChanged(object sender, EventArgs e)
    if(tabControl1.SelectedIndex == 0)
        button1.BackColor= Color.White;
        button2.BackColor = Color.White;
        button3.BackColor = Color.White;
        button4.BackColor = Color.White:
        button5.BackColor = Color.White;
button6.BackColor = Color.White;
    if(tabControl1.SelectedIndex == 1)
        button1.BackColor = Color.OrangeRed;
        button2.BackColor = Color.White;
        button3.BackColor = Color.White;
        button4.BackColor = Color.White;
        button5.BackColor = Color.White;
        button6.BackColor = Color.White;
    if(tabControl1.SelectedIndex == 2)
        button1.BackColor = Color.White;
        button2.BackColor = Color.OrangeRed;
        button3.BackColor = Color.White;
        button4.BackColor = Color.White;
        button5.BackColor = Color.White;
        button6.BackColor = Color.White;
```

```
dashboard.cs + X Form1.cs*
                                        Form1.cs [Design]*
                                                                  dashboard.cs [Design]
                                                                es_all.dashboard
C# es-all
                          if (tabControl1.SelectedIndex == 3)
                              button1.BackColor = Color.White;
                              button2.BackColor = Color.White;
                              button3.BackColor = Color.OrangeRed;
                              button4.BackColor = Color.White;
                              button5.BackColor = Color.White;
                              button6.BackColor = Color.White;
                          if(tabControl1.SelectedIndex == 4)
                              button1.BackColor = Color.White;
                              button2.BackColor = Color.White;
                              button3.BackColor = Color.White;
                              button4.BackColor = Color.OrangeRed;
                              button5.BackColor = Color.White;
                              button6.BackColor = Color.White;
                          if (tabControl1.SelectedIndex == 5)
                              button1.BackColor = Color.White;
                              button2.BackColor = Color.White;
                              button3.BackColor = Color.White;
                              button4.BackColor = Color.White;
                              button5.BackColor = Color.OrangeRed;
                              button6.BackColor = Color.White;
                          if (tabControl1.SelectedIndex == 6)
                              button1.BackColor = Color.White;
                              button2.BackColor = Color.White;
                              button3.BackColor = Color.White;
                              button4.BackColor = Color.White;
                              button5.BackColor = Color.White;
```



```
private void button10_Click(object sender, EventArgs e)
                     SqlCommand loadCustomers = new SqlCommand(customerQuery, con);
SqlDataAdapter customerAdapter = new SqlDataAdapter(loadCustomers);
396
                     DataSet customerDataSet = new DataSet();
                     customerAdapter.Fill(customerDataSet);
                     dataGridView1.DataSource = customerDataSet.Tables[0];
400
                 private void button11_Click(object sender, EventArgs e)
404
                     SqlCommand loadCompany = new SqlCommand(companyQuery, con);
                     SqlDataAdapter companyAdapter = new SqlDataAdapter(loadCompany);
                     DataSet companyDataSet = new DataSet();
                     companyAdapter.Fill(companyDataSet);
408
                     dataGridView3.DataSource = companyDataSet.Tables[0];
                 private void button12_Click(object sender, EventArgs e)
                     SqlCommand loadCategories = new SqlCommand(catQuery, con);
                     SqlDataAdapter catAdapter = new SqlDataAdapter(loadCategories);
                     DataSet catDataSet = new DataSet();
417
                     catAdapter.Fill(catDataSet);
                     dataGridView2.DataSource = catDataSet.Tables[0];
```

```
dashboard.cs [Design]
dashboard.cs + X Form1.cs*
                                                              🕶 🗠 es_all.dashboard
©# es-all
                      private void button13_Click(object sender, EventArgs e)
                          SqlCommand loadAppointment = new SqlCommand(appoQueary, con);
                          SqlDataAdapter appointmentAdapter = new SqlDataAdapter(loadAppointment);
                          DataSet appointmentDataSet = new DataSet();
                          appointmentAdapter.Fill(appointmentDataSet);
                          dataGridView4.DataSource = appointmentDataSet.Tables[0];
                      private void button15_Click(object sender, EventArgs e)
                          new_opportunity new_opportunity = new new_opportunity();
                          new_opportunity.Show();
                      private void button16_Click(object sender, EventArgs e)
                          SqlCommand loadoppertunity = new SqlCommand(opportunityQueary, con);
                          SqlDataAdapter opportunityAdapter = new SqlDataAdapter(loadoppertunity);
                          DataSet oppertunityDataset = new DataSet();
                          opportunityAdapter.Fill(oppertunityDataset);
                          dataGridView5.DataSource = oppertunityDataset.Tables[0];
                      private void label7_Click(object sender, EventArgs e)
                      private void button17_Click(object sender, EventArgs e)
                          new_product new_Product = new new_product();
                          new_Product.Show();
      484
```



```
private void new_customer_Load(object sender, EventArgs e)
620
                  con = new SqlConnection(conString);
                   con.Open();
                  string loadCompanyQuery = "SELECT companyName FROM company";
                  SqlCommand companyCommand = new SqlCommand(loadCompanyQuery, con);
                  SqlDataReader companyDataReader = companyCommand.ExecuteReader();
                  comboBox2.Items.Clear();
                  while (companyDataReader.Read())
                      comboBox2.Items.Add(companyDataReader["companyName"].ToString());
                  companyDataReader.Close();
                  SqlCommand loadId= new SqlCommand("SELECT id FROM customer", con);
                   SqlDataReader idDataReader = loadId.ExecuteReader();
                  while (idDataReader.Read())
                      comboBox1.Items.Add(idDataReader["id"]);
                   idDataReader.Close();
```



```
| Tew_customer.cs | X | New_customer.cs | Design | dashboard.cs | Form | Cs | Form | Cs | Design | New_customer.cs | Design | New_customer.cs | New_customer
```



09. DATABASE & TABLES

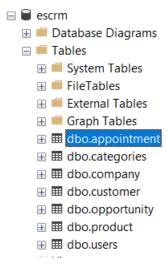


Figure 1 - Database

	Column Name	Data Type	Allow Nulls
•	id	int	
	username	varchar(50)	
	password	varchar(50)	

Figure 2- User table

	Column Name	Data Type	Allow Nulls
•	id	int	
	firstName	varchar(50)	$\overline{\mathbf{v}}$
	lastName	varchar(50)	$\overline{\checkmark}$
	email	varchar(50)	$\overline{\checkmark}$
	mobile	int	$\overline{\mathbf{v}}$
	company	varchar(50)	$\overline{\mathbf{v}}$

Figure 3 - Customer table



	Column Name	Data Type	Allow Nulls
•	id	int	
	companyName	varchar(50)	$\overline{\checkmark}$
	address	varchar(50)	$\overline{\checkmark}$
	email	varchar(50)	$\overline{\checkmark}$
	telephone	int	$\overline{\checkmark}$
	category	varchar(50)	$\overline{\smile}$

Figure 4 - Company table

	Column Name	Data Type	Allow Nulls
Þ	id	int	
	referanceNumber	int	
	venue	varchar(50)	$\overline{\mathbf{v}}$
	dateTime	datetime	$\overline{\mathbf{v}}$
	person	varchar(50)	
	topic	varchar(50)	$\overline{\mathbf{v}}$

Figure 5 - Appointment table

	Column Name	Data Type	Allow Nulls
•	id	int	
	referanceNumber	int	
	company	varchar(50)	
	person	varchar(50)	
	probability	int	
	description	varchar(50)	

Figure 6 - Opportunity table

	Column Name	Data Type	Allow Nulls
•	id	int	
	productCode (SQL Server-16.0.1050 - Tharusha_Dell	int	
	productName	varchar(50)	
	supplier	varchar(50)	
	category	varchar(50)	

Figure 7 - Product table



	Column Name	Data Type	Allow Nulls
•	id	int	
	category	varchar(50)	$\overline{\smile}$

Figure 8 - Category table



10. GROUP MEMBERS

22744	BT JAYASURIYA
23583	MKVI MEDHANI
22724	KWCNB KOBBEKADUWA
22717	EGTD EGODAGE
22748	WBMNWN BASNAYAKE
22749	WK CHANDANAYAKE
23648	NS LIYANAGE

END