

INDEPENDENT VOTING COMMISSION (IVC) Code of scope

CMPG 213



KK Sereme 44567987

y Mojaki 35326859

S Ngobese 32207824

M Serwala 32711514

t mamogobo 40969754

a Zwane 41509056

D chauke 39774406

L Anyanwu 43686784

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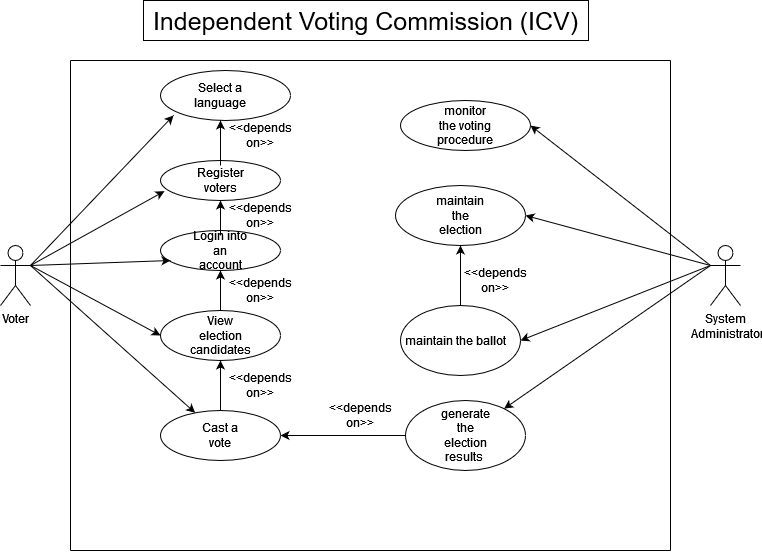
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# USE-CASE DIAGRAM



Code from Use-case

# Select a language

private void RegisterPage\_Load(object sender, EventArgs e)

{

BtnConfirm.Visible = false;

//sesotho language

if(chosenLanguage == "sesotho")

{

lblheading.Text = "IVC LEPHEPHE LA NGODISO";

groupBox1.Text = "disntla tse di amanang le uena";

lbltitle.Text = "Sehlooho:";

lblGender.Text = "Bong";

lblFirstName.Text = "Lebitso la Pele: ";

lblLastName.Text = "fane";

lblMiddleName.Text = "Lebitso la Gare:";

gbContactInfromation.Text = "Aterese ea Sebaka";

lblStreetname.Text = "Nomoro ea Ntlo:";

lblStreetname.Text = "Lebisto la seterata:";

lblSurburb.Text = "Toropo:";

lblProvicnce.Text = "Profinse:";

lblPostalcode.Text = "Nomora ea Poso:";

gbContactInfromation.Text = "Dintlha tsa mohala";

lblemail.Text = "Aterese ea Imeile:";

lblCellphone.Text = "Nomoro ea Mohala(+27):";

GbPhysicalAdress.Text = "Dintlha tsa ho kena";

lblIDNumber.Text = "Nomoro ea ID:";

LblPassword.Text = "Phasewete";

lblConfirmPassword.Text = "Netefatsa Phasewete";

BtnBack.Text = "morao";

BtnRegister.Text = "ngodisa";

}

//afrikaans language

else if(chosenLanguage == "afrikaans")

{

lblheading.Text = "IVC REGISTEREER BLADSY";

groupBox1.Text = "Personlik inligting";

lbltitle.Text = "Titel:";

lblGender.Text = "Geslag";

lblFirstName.Text = "Eerste Naam: ";

lblLastName.Text = "Laaste Naam";

lblMiddleName.Text = "Middel Naam:";

gbContactInfromation.Text = "Kontak Inligting";

lblStreetname.Text = "Straat Nommer:";

lblStreetname.Text = "Straat Naam:";

lblSurburb.Text = "Dorp:";

lblProvicnce.Text = "Profinsie:";

lblPostalcode.Text = "Poskode:";

gbContactInfromation.Text = "Kontak Inligting";

lblemail.Text = "E-Pos Adres:";

lblCellphone.Text = "Selfoon Nommer(+27):";

GbPhysicalAdress.Text = "Teken AanInligting";

lblIDNumber.Text = "ID Nommer:";

LblPassword.Text = "Wagwoord:";

lblConfirmPassword.Text = "Bevestig wagwoord";

BtnBack.Text = "Terug";

BtnRegister.Text = "Registereer";

}

//isiZulu language

else if(chosenLanguage == “isiZulu")

{

lblheading.Text = "IVC REGISTEREER BLADSY";

groupBox1.Text = "Ulwazi lomuntu siqu";

lbltitle.Text = "Isihloko:";

lblGender.Text = "Ubulili:";

lblFirstName.Text = "Igama:";

lblLastName.Text = "Isibongo:";

lblMiddleName.Text = "Igama lakho:";

gbContactInfromation.Text = "Ulwazi lokuxhumana";

lblStreetnumber.Text = "Inombolo yomgwaqo:";

lblStreetname.Text = "Igama lomgwaqo:";

lblSurburb.Text = "Idolobha:";

lblProvicnce.Text = "isifundazwe:";

lblPostalcode.Text = "I-Postal Code:";

gbContactInfromation.Text = "Ulwazi lokuxhumana";

lblemail.Text = "I-imeyili:";

lblCellphone.Text = "Inombolo yeselula(+27):";

GbPhysicalAdress.Text = "Ikheli lendawo";

lblIDNumber.Text = "Inombolo ye-ID:";

LblPassword.Text = "Iphasiwedi:";

lblConfirmPassword.Text = "Qinisekisa iphasiwedi";

BtnBack.Text = "Emuva";

BtnRegister.Text = "Bhalisa";

}

}

else{

//change this to english for the default language to be english

lblheading.Text = "IVC REGISTERATION PAGE";

groupBox1.Text = "Personal Information";

lbltitle.Text = "Title:";

lblGender.Text = "Gender:";

lblFirstName.Text = "First Name: ";

lblLastName.Text = "Last Name: ";

lblMiddleName.Text = "Middle Name:";

GbPhysicalAdress.Text = "Physical Adress";

lblStreetname.Text = "Street Name: ";

lblSurburb.Text = "Surburb/Town: ";

lblProvicnce.Text = "Province:";

lblPostalcode.Text = "Postal code:";

gbContactInfromation.Text = "Contact Information";

lblemail.Text = "Email Address:";

lblCellphone.Text = "Cellphone Number(+27):";

GbPhysicalAdress.Text = "Physical Adress";

lblIDNumber.Text = "ID Number:";

LblPassword.Text = "Password:";

lblConfirmPassword.Text = "Confirm Password:";

BtnBack.Text = "Back";

BtnRegister.Text = "Confirm";

}

try

{

connection = new SqlConnection(@"Data Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=C:\Users\27685\OneDrive\Documents\IVC\_Database.mdf;Integrated Security=True;Connect Timeout=30");

connection.Open();

connection.Close();

}

catch (SqlException ex)

{

MessageBox.Show(ex.Message);

}

}

# Register to vote

using System;

using System.Collections.Generic;

using System.ComponentModel;

using System.Data;

using System.Data.SqlClient;

using System.Drawing;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Windows.Forms;

using System.Xml.Linq;

using System.Data.SqlClient;

using System.Text.RegularExpressions;

namespace Group23Project\_IndependentVotingCommision.Properties

{

public partial class RegisterPage : Form

{

//remember to put in vote in the vote database

public string IDNumber = "", firstName = "", middleName = "", lastName = "", gender = "", title = "", StreetName = "", Surburb = "", Province = "", PostalCode = "", emailAdress = "", CellNumber = "";

public int houseNumber = 0;

private void txtIDNumber\_TextChanged(object sender, EventArgs e)

{

//=============================no clue what this does its done by Delilah thou===============================================

string idNumber = txtIDNumber.Text;

if (idNumber.Length >= 2 && int.TryParse(idNumber.Substring(0, 2), out int birthYearFirstTwoDigits))

{

int birthYear = 2000 + birthYearFirstTwoDigits; // Assuming the ID contains a two-digit year (e.g., YY)

int age = CalculateAge(birthYear);

if (age >= 18 && idNumber.Length == 13)

{

txtIDNumber.ForeColor = System.Drawing.Color.Green;

}

else

{

txtIDNumber.ForeColor = System.Drawing.Color.Red;

}

}

}

//=======================================Function for calculating the age=========================================================

private int CalculateAge(int birthYear)

{

int currentYear = DateTime.Today.Year;

int age = currentYear - birthYear;

return age;

}

private void txtCellPhoneNumber\_TextChanged(object sender, EventArgs e)

{

//================================validate phone number==================================

//remember to add code to stop user from proceeding when the number is wrong

string inputNumber = txtCellPhoneNumber.Text.Trim();

string pattern = @"^\+27\d{9}$";

if (Regex.IsMatch(inputNumber, pattern))

{

txtCellPhoneNumber.ForeColor = System.Drawing.Color.Green;

BtnConfirm.Enabled = true;

lblerror.Visible = false;

}

else

{

txtCellPhoneNumber.ForeColor = System.Drawing.Color.Red;

BtnConfirm.Enabled = false;

lblerror.Text = "the number you have entered us incorrect please ensure that it starts with +27 and is the right length ";

}

}

private void lblhousenumber\_Click(object sender, EventArgs e)

{

}

public string Password = "";

public string sqlcommand;

SqlConnection connection = new SqlConnection();

SqlCommand command = new SqlCommand();

SqlDataAdapter adapter = new SqlDataAdapter();

public string chosenLanguage;

public RegisterPage(string language)

{

InitializeComponent();

chosenLanguage = language;

}

private void BtnBack\_Click(object sender, EventArgs e)

{

frmWelcomePage welcomePage = new frmWelcomePage();

welcomePage.ShowDialog();

this.Hide();

chosenLanguage = "";

listBox1.Items.Clear();

//hide forms

}

private void BtnConfirm\_Click(object sender, EventArgs e)

{

if (txtCellPhoneNumber.Text != null && txtConfirmPassword.Text != null && txtEmail.Text != null && txtFirstName.Text != null && txtHouseNumber.Text != null && txtIDNumber.Text != null && txtLastName.Text != null && txtMiddleName.Text != null && txtPassword.Text != null && txtPostalCode.Text != null && txtStreetName.Text != null && txtSurburb.Text != null)

{

try

{

connection.Open();

sqlcommand = $"INSERT INTO Voters VALUES ('{txtIDNumber.Text}','{txtFirstName.Text}','{txtLastName.Text}','{txtMiddleName.Text}','{txtHouseNumber.Text}','{txtStreetName.Text}','{txtSurburb.Text}','{cbProvince.Text}','{txtPostalCode.Text}','{txtEmail.Text}','{txtCellPhoneNumber.Text}','{txtPassword.Text}','{cbTitle.Text}')";

command = new SqlCommand(sqlcommand, connection);

adapter.InsertCommand = command;

adapter.InsertCommand.ExecuteNonQuery();

listBox1.Items.Clear();

MessageBox.Show("You have successfully registered");

LoginPage loginPage = new LoginPage();

loginPage.Show();

this.Hide();

connection.Close();

}

catch(SqlException ex)

{

MessageBox.Show(ex.Message);

}

}

}

private void BtnRegister\_Click(object sender, EventArgs e)

{

try

{

//store textbox values in the variables

int.TryParse(txtHouseNumber.Text, out houseNumber);

IDNumber = txtIDNumber.Text;

firstName = txtFirstName.Text;

lastName = txtLastName.Text;

middleName = txtMiddleName.Text;

StreetName = txtStreetName.Text;

Surburb = txtSurburb.Text;

Province = cbProvince.Text;

PostalCode = txtPostalCode.Text;

emailAdress = txtEmail.Text;

CellNumber = txtCellPhoneNumber.Text;

title = cbTitle.Text;

gender = CbGender.Text;

Password = txtPassword.Text;

//list box showing the users details

listBox1.Items.Add("Your details are as follows");

listBox1.Items.Add(" ");

listBox1.Items.Add("Title:" + "\t" + title);

listBox1.Items.Add("Gender:" + "\t" + gender);

listBox1.Items.Add("ID Number: " + "\t" + IDNumber);

listBox1.Items.Add("First name: " + "\t" + firstName);

listBox1.Items.Add("Middle name: " + "\t" + middleName);

listBox1.Items.Add("Last name: " + "\t" + lastName);

listBox1.Items.Add("House Number: " + "\t" + houseNumber);

listBox1.Items.Add("Street Name: " + "\t" + StreetName);

listBox1.Items.Add("Surburb: " + "\t" + Surburb);

listBox1.Items.Add("Province: " + "\t" + Province);

listBox1.Items.Add("Postal Code: " + "\t" + PostalCode);

listBox1.Items.Add("Email Address:" + "\t" + emailAdress);

listBox1.Items.Add("Cellphone Number: " + "\t" + CellNumber);

if (txtConfirmPassword.Text != txtPassword.Text)

{

MessageBox.Show("The passwords do not match!");

txtPassword.Text = " ";

txtConfirmPassword.Text = " ";

}

else if (txtPassword.TextLength < 8)

{

MessageBox.Show("Password is less than 8 characters");

}

else

{

BtnConfirm.Visible = true;

BtnRegister.Visible = false;

}

}

catch (Exception ex)

{

//if theres an error in the code we will know what the error is because it will be shown in a message box

MessageBox.Show(ex.Message);

}

}

# Login

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;

using System.Data.SqlClient;

using Group23Project\_IndependentVotingCommision.Properties;

using System.Net.Http.Headers;

namespace Group23Project\_IndependentVotingCommision

{

public partial class LoginPage : Form

{

SqlConnection connection = new SqlConnection();

SqlCommand command = new SqlCommand();

SqlDataAdapter adapter = new SqlDataAdapter();

DataTable dt = new DataTable();

public string name, password, sqlcommand;

public LoginPage()

{

InitializeComponent();

}

private void label1\_Click(object sender, EventArgs e)

{

}

private void btnBack\_Click(object sender, EventArgs e)

{

frmWelcomePage welcomePage = new frmWelcomePage();

welcomePage.Show();

this.Close();

}

private void btnConfirm\_Click(object sender, EventArgs e)

{

try

{

connection.Open();

sqlcommand = @"SELECT \* FROM Voters where IDNumber ='" + txtIdentificationNumber.Text + "' AND Password = '" + txtPassword.Text + "'";

adapter = new SqlDataAdapter(sqlcommand, connection);

adapter.Fill(dt);

if (dt.Rows.Count > 0)

{

name = txtIdentificationNumber.Text;

password = txtPassword.Text;

FrmBallot ballot = new FrmBallot();

ballot.Show();

this.Hide();

password = "";

name = "";

}

else

{

MessageBox.Show("invalid user details", "error", MessageBoxButtons.OK, MessageBoxIcon.Error);

txtPassword.Clear();

txtIdentificationNumber.Clear();

txtIdentificationNumber.Focus();

}

connection.Close();

}

catch

{

}

}

private void LoginPage\_Load(object sender, EventArgs e)

{

try

{

connection = new SqlConnection(@"Data Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=C:\Users\27685\OneDrive\Documents\IVC\_Database.mdf;Integrated Security=True;Connect Timeout=30");

connection.Open();

connection.Close();

}

catch(SqlException ex)

{

MessageBox.Show(ex.Message);

}

}

}

}

# View election candidates

using System;

using System.Collections.Generic;

using System.ComponentModel;

using System.Data;

using System.Data.SqlClient;

using System.Drawing;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Windows.Forms;

namespace Group23Project\_IndependentVotingCommision.Properties

{

public partial class FrmBallot : Form

{

public string sqlcommand;

SqlConnection connection = new SqlConnection();

SqlCommand command = new SqlCommand();

SqlDataAdapter adapter = new SqlDataAdapter();

public string vote;

int BallotID;

public FrmBallot()

{

InitializeComponent();

}

private void btnLogOut\_Click\_1(object sender, EventArgs e)

{

LoginPage login = new LoginPage();

login.Show();

this.Hide();

}

private void FrmBallot\_Load(object sender, EventArgs e)

{

try

{

connection = new SqlConnection(@"Data Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=C:\Users\27685\OneDrive\Documents\IVC\_Database.mdf;Integrated Security=True;Connect Timeout=30");

connection.Open();

connection.Close();

}

catch (SqlException ex)

{

MessageBox.Show(ex.Message);

}

}

# Cast a vote

private void btnConfirmVote\_Click(object sender, EventArgs e)

{

if (radioABDP.Checked)

{

vote = "ABDP";

}

else if (radioANC.Checked)

{

vote = "ANC";

}

else if (radioDA.Checked)

{

vote = "DA";

}

else if (radioEFF.Checked)

{

vote = "EFF";

}

else if (radioIFP.Checked)

{

vote = "IFP";

}

else if (radioUDM.Checked)

{

vote = "UDM";

}

else

{

MessageBox.Show("Please choose a political party");

}

try

{

connection.Open();

sqlcommand = $"INSERT INTO VotesRecorded VALUES ('')";

command = new SqlCommand(sqlcommand, connection);

adapter.InsertCommand = command;

adapter.InsertCommand.ExecuteNonQuery();

listBox1.Items.Clear();

MessageBox.Show("You have successfully registered");

LoginPage loginPage = new LoginPage();

loginPage.Show();

this.Hide();

connection.Close();

}

catch (SqlException ex)

{

MessageBox.Show(ex.Message);

}

}

# SQL Database for Registration

A screenshot of a computer program

Description automatically generated

# SQL Database for the Ballot