Bahria University,

Karachi Campus



LAB EXPERIMENT NO.

\_\_\_12\_\_\_

LIST OF TASKS

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| --- | --- |
| TASK NO | OBJECTIVE |
| **01** | **Create layered architecture style project for Generating Marksheet of a student. The system can be able to add new students 🡪 add scores of subjects (you can make 5 subjects of your choice) 🡪 Show list of students from database 🡪 Generate mark sheet for student when click on it.** |
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Submitted On

20-06-2023

(Date: DD/MM/YY)

**Task No. 1:** **Create layered architecture style project for Generating Marksheet of a student. The system can be able to add new students 🡪 add scores of subjects (you can make 5 subjects of your choice) 🡪 Show list of students from database 🡪 Generate mark sheet for student when click on it.**

**Solution:**

private void button1\_Click(object sender, EventArgs e){

MessageBox.Show("Record Saved");}

private void button2\_Click(object sender, EventArgs e){

textBox1.Text = "";

textBox2.Text = "";

textBox3.Text = "";}

private void button5\_Click(object sender, EventArgs e){

this.Close();}

private void button3\_Click(object sender, EventArgs e){

Sheet sht = new Sheet();

sht.Show();

this.Hide();}

private void button5\_Click(object sender, EventArgs e){

Form1 srm = new Form1();

this.Hide();

srm.Show();}

private void button1\_Click(object sender, EventArgs e){

double total = double.Parse(textBox2.Text) + double.Parse(textBox4.Text) + double.Parse(textBox6.Text) + double.Parse(textBox7.Text) + double.Parse(textBox10.Text) + double.Parse(textBox11.Text);

label22.Text = total.ToString();

double totalmarks = 600;

double percentage = (total\*100)/ totalmarks;

if (percentage>=80){

label26.Text = "A+";}

else if(percentage >= 70 && percentage<80){

label26.Text = "A";}

else if (percentage >= 60 && percentage < 70){

label26.Text = "B";}

else if (percentage >= 50 && percentage < 60){

label26.Text = "C";}

else if (percentage >= 40 && percentage < 50){

label26.Text = "D";}

else if ( percentage < 40){

label26.Text = "Fail";}}

public partial class Sheet : Form{

public Sheet(){

InitializeComponent();}

private void label7\_Click(object sender, EventArgs e){}

private void button5\_Click(object sender, EventArgs e){

Form1 srm = new Form1();

this.Hide();

srm.Show();}

private void button1\_Click(object sender, EventArgs e){

double total = double.Parse(textBox2.Text) + double.Parse(textBox4.Text) + double.Parse(textBox6.Text) + double.Parse(textBox7.Text) + double.Parse(textBox10.Text) + double.Parse(textBox11.Text);

label22.Text = total.ToString();

double totalmarks = 600;

double percentage = (total\*100)/ totalmarks;

label24.Text = percentage.ToString();

if (percentage>=80){

label26.Text = "A+";}

else if(percentage >= 70 && percentage<80){

label26.Text = "A";}

else if (percentage >= 60 && percentage < 70){

label26.Text = "B";}

else if (percentage >= 50 && percentage < 60){

label26.Text = "C";}

else if (percentage >= 40 && percentage < 50){

label26.Text = "D";}

else if ( percentage < 40){

label26.Text = "Fail";}}}}

**Business Logic Layer:**

public class BusinessLogicClass{

Users users;DataAccessClass dataAccessClass;public BusinessLogicClass(){  
dataAccessClass = new DataAccessClass();

users = new Users();

public int View MarksheetData(String username, String StudentID){

users.UserName = username; users.StudentID = StudentID;

String query = "Select UserName, StudentID from customtab where UserName= '" + users.UserName + "' and StudentID='" + users.StudentID + "'";

if (dataAccessClass.loginForm(query) == 0){

MessageBox.Show("Error has occured");

return 0;}

else{

return 1;}}

public void InsertMarksheetRecord(String StdId, String Course1, String Course2, String Course3, String Course4,String Course5, String Course6, String total, String Perc, String Grade){

String Query = "insert into StdMarks(StdID ,course1, course2, course3 ,course4,course5,course6,total,percentage,grade) values('" + textBox2.Text + "','" + textBox4.Text + "','" + textBox6.Text + "','" + textBox7.Text + "','" + textBox10.Text + "','" + textBox11.Text + "','" + label22.Text + "','" + label24.Text + "','" + label26.Text + "')";

dataAccessClass.DataManipulationOperation(Query);}

public void StudentData(String StdId, String Name, String Fname, String Age, String Gender, String Class){

String Query = "insert into Student(StdID ,Name, Fname, Age ,Gender,Class) values('" + textBox1.Text + "','" + textBox2.Text + "','" + textBox3.Text + "','" + monthCalendar1.Text + "','" + comboBox1.Text + "','" + comboBox2.Text + "')";

dataAccessClass.DataManipulationOperation(Query);}}}

**Data Access Layer:**public class DataAccessClass{

SqlConnection conn;

SqlCommand cmd;

SqlDataAdapter sda;

DataTable dt;

Users users;

public DataAccessClass(){

string connectionString = @"Data Source=DESKTOP-UA4FIBG\SQLEXPRESS;Initial Catalog=Multilayeredmdf;Integrated Security=True";

conn = new SqlConnection(connectionString);

users = new Users();}

public bool DataManipulationOperation(string query){

conn.Open();

cmd = new SqlCommand(query, conn);

int count = cmd.ExecuteNonQuery();

if (count > 0){

conn.Close();

return true;}

conn.Close();

return false;}

public DataTable DataNavigationOperations(string query){

cmd = new SqlCommand(query, conn);

sda = new SqlDataAdapter(cmd);

dt = new DataTable();

sda.Fill(dt);

if (dt.Rows != null){

return dt;}

return null;}

public int loginForm(String query){

int count = 0;

conn.Open();

cmd = new SqlCommand(query, conn);

cmd.Connection = conn;

cmd.CommandText = query;

SqlDataReader reader = cmd.ExecuteReader();

while (reader.Read()){

count = count + 1;}

if (count == 1){

conn.Close();

return 1;}

else{

conn.Close();

return 0;}}}

**Output:**

Graphical user interface

Description automatically generated with medium confidence

Saleem Akhter

Shoaib Akhter

Graphical user interface, table

Description automatically generated

A screenshot of a computer

Description automatically generated with medium confidence

Saleem Akhter

Shoaib Akhter