

주차 관리 프로그램

C # P R O J E C T

허동화 이원만 권승연 김민아 이진주 윤혜림 장상은 이지훈

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CHAPTER 01

프로그램 시연

Form1

주차 관리 프로그램

공간선택

주차

출차

초기화

공간번호

차량번호

이름

전화번호

16

12하1234

허동화

01022104662

| 공간번호 | 차량번호 | 이름 | 전화번호 | 일시 |
|------|---------|-----|-------------|--------------------|
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | 12하1234 | 허동화 | 01022104662 | 2022-03-22 오후 9:52 |
| 17 | | | | |
| 18 | | | | |
| 19 | | | | |

로그 내용

2022-03-22 09:52:05 (공간번호:16, 이름:허동화, 차량번호:12하1234 주차)
2022-03-22 09:51:52 (프로그램 시작)

로그 불러오기


현재시간 : 2022-03-22 21:52:51



Form2

주차 공간 배치도

| | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 |
|----|----|----|----|----|----|----|----|----|----|

| | | | | | | | | | |
|----|----|----|----|----|---|----|----|----|----|
| 11 | 12 | 13 | 14 | 15 |  16 | 17 | 18 | 19 | 20 |
|----|----|----|----|----|---|----|----|----|----|

| | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|----|----|----|----|----|----|----|----|----|----|



CHAPTER 02

코드 소개 및 설명

Data.cs

데이터베이스 연결

참조 10개

```
public class Data
```

```
{
```

```
    const string ORADB = "Data Source=(DESCRIPTION=(ADDRESS_LIST=" +  
        "(ADDRESS=(PROTOCOL=TCP)(HOST=localhost)(PORT=1521)))" +  
        "(CONNECT_DATA=(SERVER=DEDICATED)(SERVICE_NAME=XE)))";  
    "User Id=c##scott;Password=tiger;"
```

```
    public static OracleConnection OraConn = new OracleConnection(ORADB);
```

```
    public static List<ParkingCar> cars = new List<ParkingCar>();
```

```
    const string TABLE = "projectcar";
```

참조 3개

```
    static void ConnectDB()
```

```
{
```

```
    try
```

```
    {
```

```
        OraConn.Open();
```

```
    }
```

```
    catch (Exception)
```

```
    {
```

```
        throw;
```

```
    }
```

```
}
```


Data.cs

데이터베이스 쿼리문(SELECT)으로
정보 불러오기

```
public static void selectQuery()
{
    ConnectDB();

    string sql;
    sql = "select * from " + TABLE + " order by to_number(parknum)";

    OracleDataAdapter oda = new OracleDataAdapter();
    oda.SelectCommand = new OracleCommand();
    oda.SelectCommand.Connection = OraConn;
    oda.SelectCommand.CommandText = sql;

    DataSet ds = new DataSet();
    oda.Fill(ds, TABLE);

    cars.Clear();

    foreach (DataRow item in ds.Tables[0].Rows)
    {
        ParkingCar car = new ParkingCar();
        car.ParkNum = int.Parse(item["parknum"].ToString());
        car.CarNumber = item["carnumber"].ToString();
        car.DriverName = item["drivername"].ToString();
        car.PhoneNumber = item["phonenumber"].ToString();
        car.ParkingTime = item["parkingtime"].ToString()
            == "" ? new DateTime() : DateTime.Parse(item["parkingtime"].ToString());

        cars.Add(car);
    }

    OraConn.Close();
}
```


Data.cs

데이터베이스 쿼리문(UPDATE)

실행

참조 1개

```
static string Query(string menu, string parknum, string carnumber, string drivename, string phonenum)
{
    string query = "";
    switch (menu)
    {
        case "update":
            query = $"update {TABLE} set carnumber='{carnumber}',drivename='{drivename}',phonenum='{phonenum}' where parknum='{parknum}'";
            break;
        case "delete":
            query = $"delete {TABLE} where carnumber='{carnumber}' and drivename='{drivename}' and phonenum='{phonenum}'";
            break;
        default:
            break;
    }
    return query;
}
```

참조 3개

```
public static void executeQuery(string menu, string parknum, string carnumber = null, string drivename = null, string phonenum = null)
{
    ConnectDB();
    string query = "";
    try
    {
        OracleCommand cmd = new OracleCommand();
        cmd.Connection = OraConn;
        query = Query(menu, parknum, carnumber, drivename, phonenum);
        cmd.CommandText = query;
        cmd.ExecuteNonQuery();
    }
}
```


Form1.cs

UI 디자인 및 배경색상 설정
(윈도우 창 포함)

참조 1개

```
public Form1()
{
    InitializeComponent();
    Color c = Color.FromArgb(224, 229, 236); //배경색
    Color d = Color.FromArgb(91, 91, 91); //글자색
    Color e = Color.FromArgb(109, 109, 109); //listview1 헤드글자색
    Color f = Color.FromArgb(240, 240, 240); //listview1 헤드배경색
    this.BackColor = c;
    this.ForeColor = d;
    this.dataGridView1.ColumnHeadersDefaultCellStyle.ForeColor = d;
    Region = System.Drawing.Region.FromHrgn(CreateRoundRectRgn(0, 0, Width, Height));
    textBox1.BackColor = c; textBox2.BackColor = c; textBox3.BackColor = c; textBox4.BackColor = c;
    textBox1.ForeColor = d; textBox2.ForeColor = d; textBox3.ForeColor = d; textBox4.ForeColor = d;
    Data.selectQuery();
    refreshScreen();
    listView1.View = View.Details;
    listView1.FullRowSelect = true;
    listView1.ForeColor = d;
    colorListViewHeader(ref listView1, f, e);
    Log_Info("프로그램 시작");
    listView1.Columns[1].Width = listView1.Width - SystemInformation.VerticalScrollBarWidth;
}
```

Form1.cs

원도우 창 이동

Datagridview에 저장된 값 입력

```
private Point mousePoint;
참조 1개
private void Form1_MouseDown(object sender, MouseEventArgs e)
{
    mousePoint = new Point(e.X, e.Y);
}

참조 1개
private void Form1_MouseMove(object sender, MouseEventArgs e)
{
    if ((e.Button & MouseButtons.Left) == MouseButtons.Left)
    {
        Location = new Point(this.Left - (mousePoint.X - e.X),
                               this.Top - (mousePoint.Y - e.Y));
    }
}

참조 4개
void refreshScreen()
{
    dataGridView1.DataSource = null;
    try
    {
        if (Data.cars.Count > 0)
        {
            dataGridView1.DataSource = Data.cars;
        }
    }
}
```


Form1.cs

—
각 버튼에 대한 이벤트 입력

주차, 출차

Form2.cs로 이동

Datagridview 초기화

참조 1개

```
private void button4_Click(object sender, EventArgs e)
{
    Form2 f2 = new Form2(this);
    f2.Show();
}
```

참조 1개

```
private void button6_Click(object sender, EventArgs e)
{
    DialogResult result = MessageBox.Show("테이블을 초기화하시겠습니까?");
    if (result == DialogResult.Yes)
    {
        Log_Info("테이블 초기화");
        Data.executeQuery("delete", textBox1.Text, "", "", "");
        refreshScreen();
    }
    else
    {
        return;
    }
}
```

Form1.cs

Log 자동 저장 및 불러오기

```
참조 5개
public bool Log_Info(string strMsg)
{
    try
    {
        string strCheckFolder = "";
        string strFileName = "";
        string strLocal = Application.ExecutablePath.Substring(0, Application.ExecutablePath.LastIndexOf(@"\"));
        strCheckFolder = strLocal + @"\Log";
        if (!System.IO.Directory.Exists(strCheckFolder))
        {
            System.IO.Directory.CreateDirectory(strCheckFolder);
        }
        strFileName = strCheckFolder + @"\ " + DateTime.Now.ToString("yyyyMMdd") + ".txt";
        System.IO.StreamWriter FileWriter = new System.IO.StreamWriter(strFileName, true);
        string msg = DateTime.Now.ToString("yyyy-MM-dd hh:mm:ss") + " (" + strMsg + ")" + "\r\n";
        FileWriter.Write(msg);
        FileWriter.Flush();
        FileWriter.Close();
        ListViewItem lvi = new ListViewItem();
        lvi.SubItems.Add(msg);
        listView1.Items.Insert(0, lvi);
    }
    catch (Exception)
    {
        return false;
        throw;
    }
    return true;
}
```


Form2.cs

UI 디자인 및 배경색상 설정
(윈도우 창 포함)

```
참조 1개
public Form2(Form1 form)
{
    InitializeComponent();
    f1 = form;
    Color c = Color.FromArgb(224, 229, 236); //배경색
    Color d = Color.FromArgb(91, 91, 91); //글자색
    Color e = Color.FromArgb(64, 64, 64); //버튼색
    this.BackColor = c;
    this.ForeColor = d;
    Region = System.Drawing.Region.FromHrgn(CreateRoundRectRgn(0, 0, Width, Height, 20, 20));
    park1.BackColor = e; park2.BackColor = e; park3.BackColor = e; park4.BackColor = e; park5.BackColor = e; park6.BackColor = e;
    park7.BackColor = e; park8.BackColor = e; park9.BackColor = e; park10.BackColor = e; park11.BackColor = e; park12.BackColor = e;
    park13.BackColor = e; park14.BackColor = e; park15.BackColor = e; park16.BackColor = e; park17.BackColor = e; park18.BackColor = e;
    park19.BackColor = e; park20.BackColor = e; park21.BackColor = e; park22.BackColor = e; park23.BackColor = e; park24.BackColor = e;
    park25.BackColor = e; park26.BackColor = e; park27.BackColor = e; park28.BackColor = e;
    ifCarOn(1, park1); ifCarOn(2, park2); ifCarOn(3, park3); ifCarOn(4, park4); ifCarOn(5, park5); ifCarOn(6, park6);
    ifCarOn(7, park7); ifCarOn(8, park8); ifCarOn(9, park9); ifCarOn(10, park10); ifCarOn(11, park11); ifCarOn(12, park12); ifCarOn(13, park13);
    ifCarOn(14, park14); ifCarOn(15, park15); ifCarOn(16, park16); ifCarOn(17, park17); ifCarOn(18, park18); ifCarOn(19, park19); ifCarOn(20, park20); ifCarOn(21, park21);
    ifCarOn(22, park22); ifCarOn(23, park23); ifCarOn(24, park24); ifCarOn(25, park25); ifCarOn(26, park26); ifCarOn(27, park27); ifCarOn(28, park28); ifCarOn(29, park29);
    ifCarOn(30, park30); ifCarOn(31, park31); ifCarOn(32, park32); ifCarOn(33, park33); ifCarOn(34, park34); ifCarOn(35, park35);
    ifCarOn(36, park36); ifCarOn(37, park37); ifCarOn(38, park38); ifCarOn(39, park39); ifCarOn(40, park40); ifCarOn(41, park41);
    ifCarOn(42, park42); ifCarOn(43, park43); ifCarOn(44, park44); ifCarOn(45, park45); ifCarOn(46, park46); ifCarOn(47, park47);
    ifCarOn(48, park48); ifCarOn(49, park49); ifCarOn(50, park50); ifCarOn(51, park51); ifCarOn(52, park52); ifCarOn(53, park53);
    ifCarOn(54, park54); ifCarOn(55, park55); ifCarOn(56, park56); ifCarOn(57, park57); ifCarOn(58, park58); ifCarOn(59, park59);
    ifCarOn(60, park60); ifCarOn(61, park61); ifCarOn(62, park62); ifCarOn(63, park63); ifCarOn(64, park64); ifCarOn(65, park65);
    ifCarOn(66, park66); ifCarOn(67, park67); ifCarOn(68, park68); ifCarOn(69, park69); ifCarOn(70, park70); ifCarOn(71, park71);
    ifCarOn(72, park72); ifCarOn(73, park73); ifCarOn(74, park74); ifCarOn(75, park75); ifCarOn(76, park76); ifCarOn(77, park77);
    ifCarOn(78, park78); ifCarOn(79, park79); ifCarOn(80, park80); ifCarOn(81, park81); ifCarOn(82, park82); ifCarOn(83, park83);
    ifCarOn(84, park84); ifCarOn(85, park85); ifCarOn(86, park86); ifCarOn(87, park87); ifCarOn(88, park88); ifCarOn(89, park89);
    ifCarOn(90, park90); ifCarOn(91, park91); ifCarOn(92, park92); ifCarOn(93, park93); ifCarOn(94, park94); ifCarOn(95, park95);
    ifCarOn(96, park96); ifCarOn(97, park97); ifCarOn(98, park98); ifCarOn(99, park99); ifCarOn(100, park100);
}
```

Form2.cs

주차공간에 차가 주차되어 있을 시,
차 이미지 표시

주차공간 선택 시,
Form1의 Textbox에 주차된 차의
정보 자동 입력

```
참조 30개
public void ifCarOn(int num, Button park)
{
    ParkingCar car = Data.selectQuery(num);
    if (car.CarNumber != "")
    {
        park.Image = Properties.Resources.car4;
    }
}

참조 30개
public void buttonOn(int num)
{
    ParkingCar car = Data.selectQuery(num);
    f1.textBox1.Text = car.ParkNum.ToString();
    f1.textBox2.Text = car.CarNumber;
    f1.textBox3.Text = car.DriverName;
    f1.textBox4.Text = car.PhoneNumber;
    Dispose();
}
```


Q & A

/

Are there any question?

THANK
YOU EVERYONE

구현을 표시할 + 있습니다.