BOOKKEEPING APP

第十一組
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功能介紹

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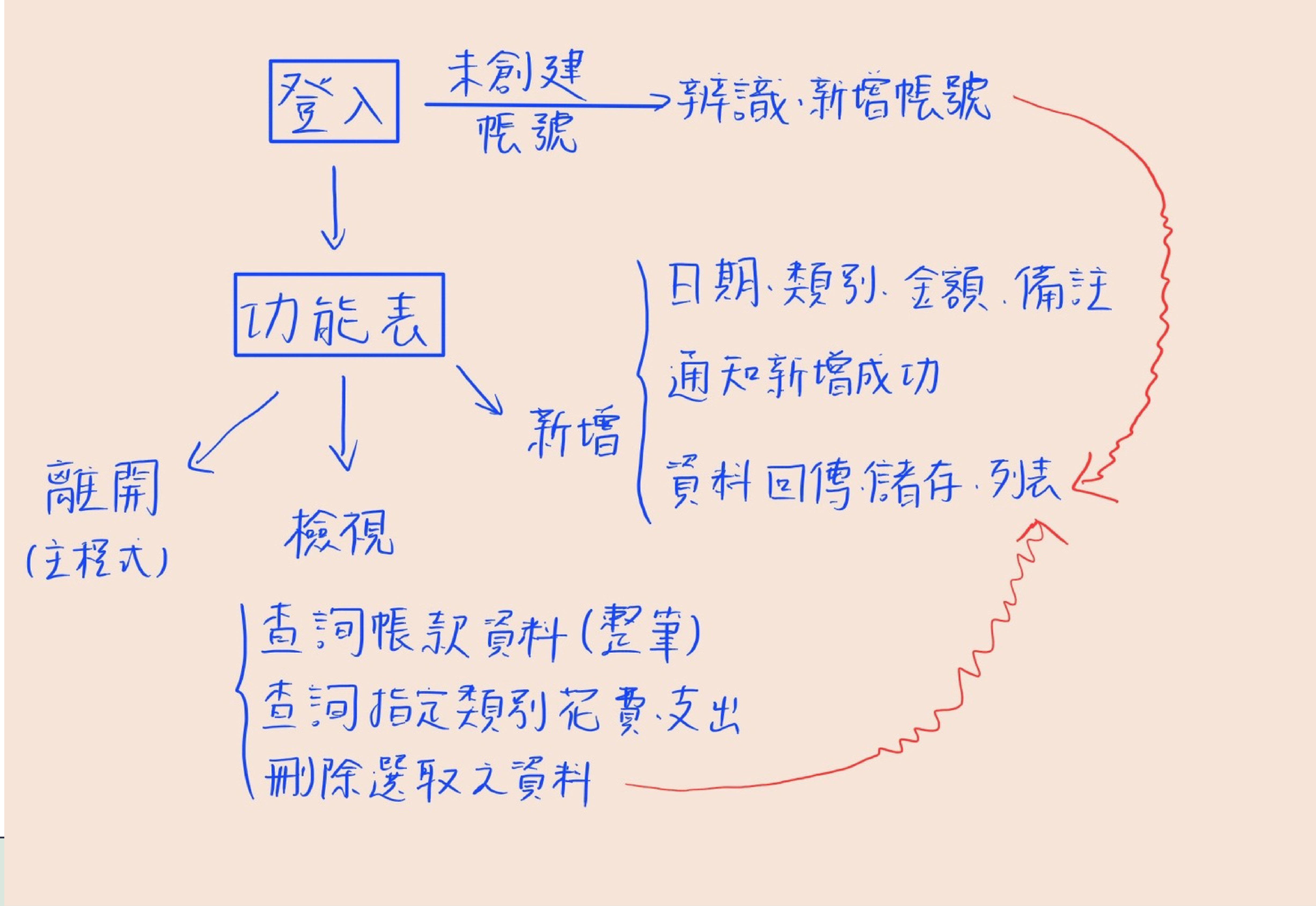
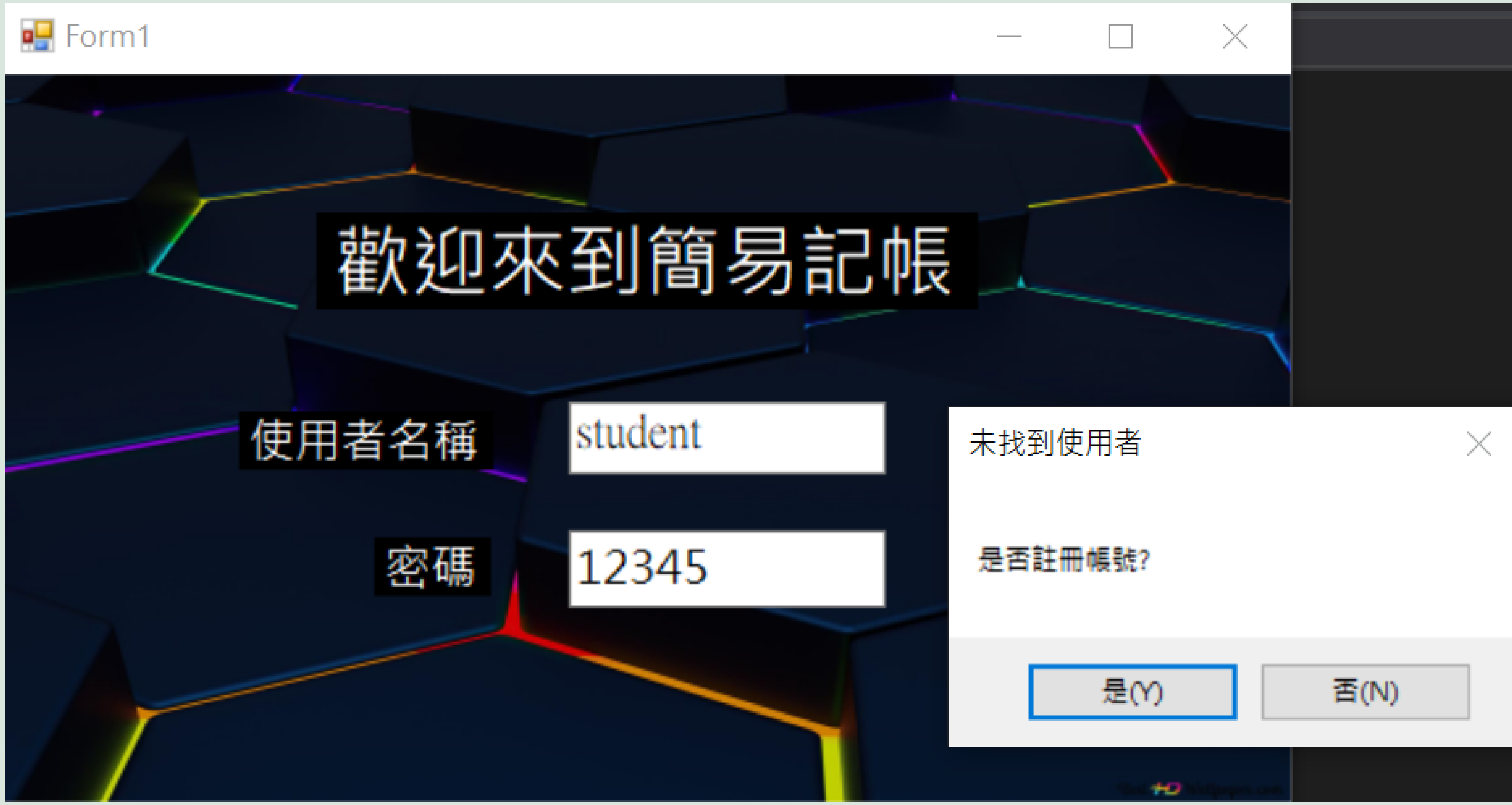
⊗ 功能介紹


登入
未創建
帳號
辨識.新增帳號
功能表
離開
(主程式)
檢視
新增
日期.類別.金額.備註
通知新增成功
資料回傳儲存.列表
查詢帳款資料(整筆)
查詢指定類別花費.支出
刪除選取之資料

登錄頁面

檢查使用者是否有登錄記錄，若無則將資料記錄到user.txt以創建身分；若有記錄則可進錄軟體。



Form1

歡迎來到簡易記帳

使用者名稱 student

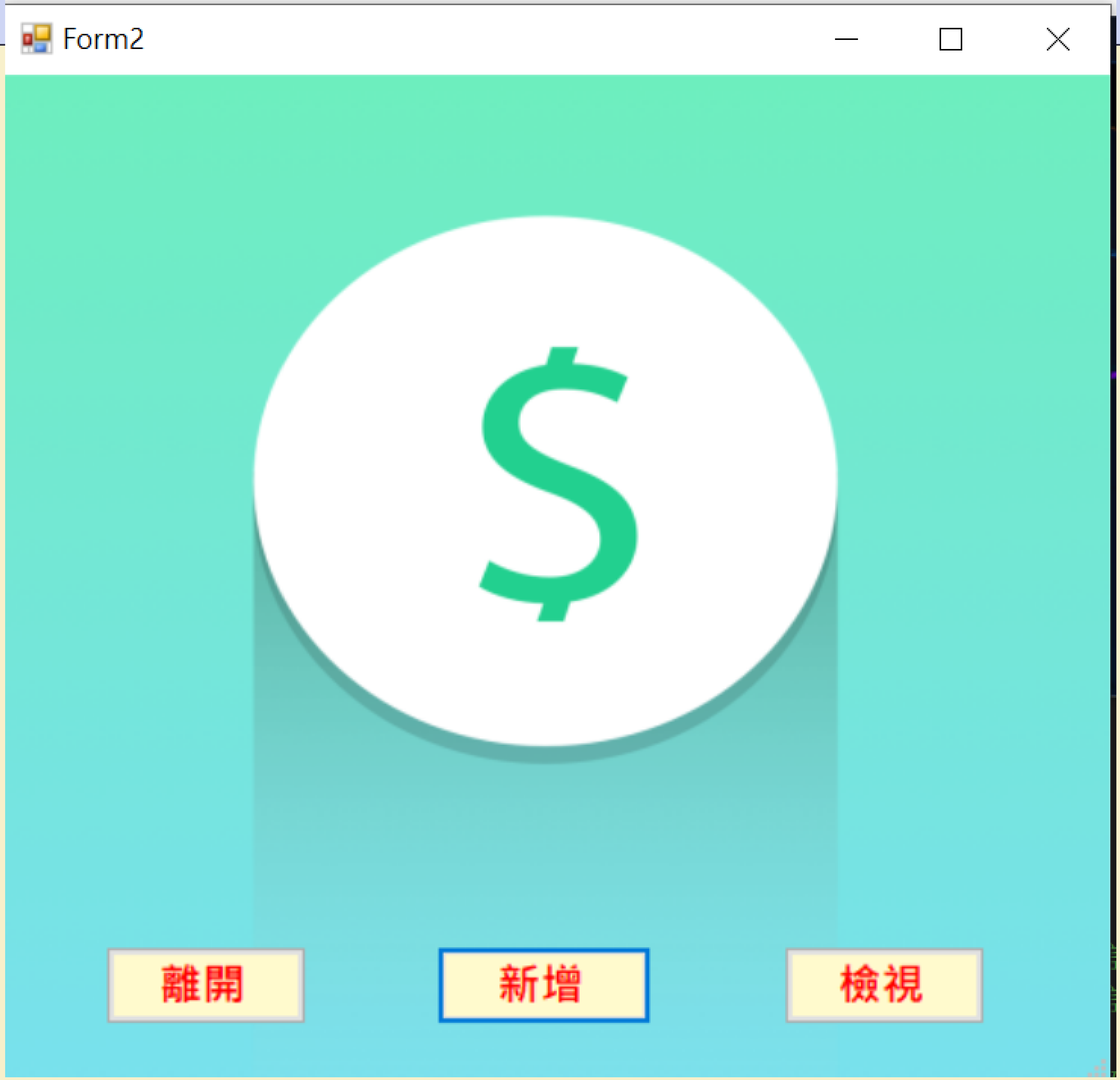
密碼 12345

未找到使用者

是否註冊帳號?

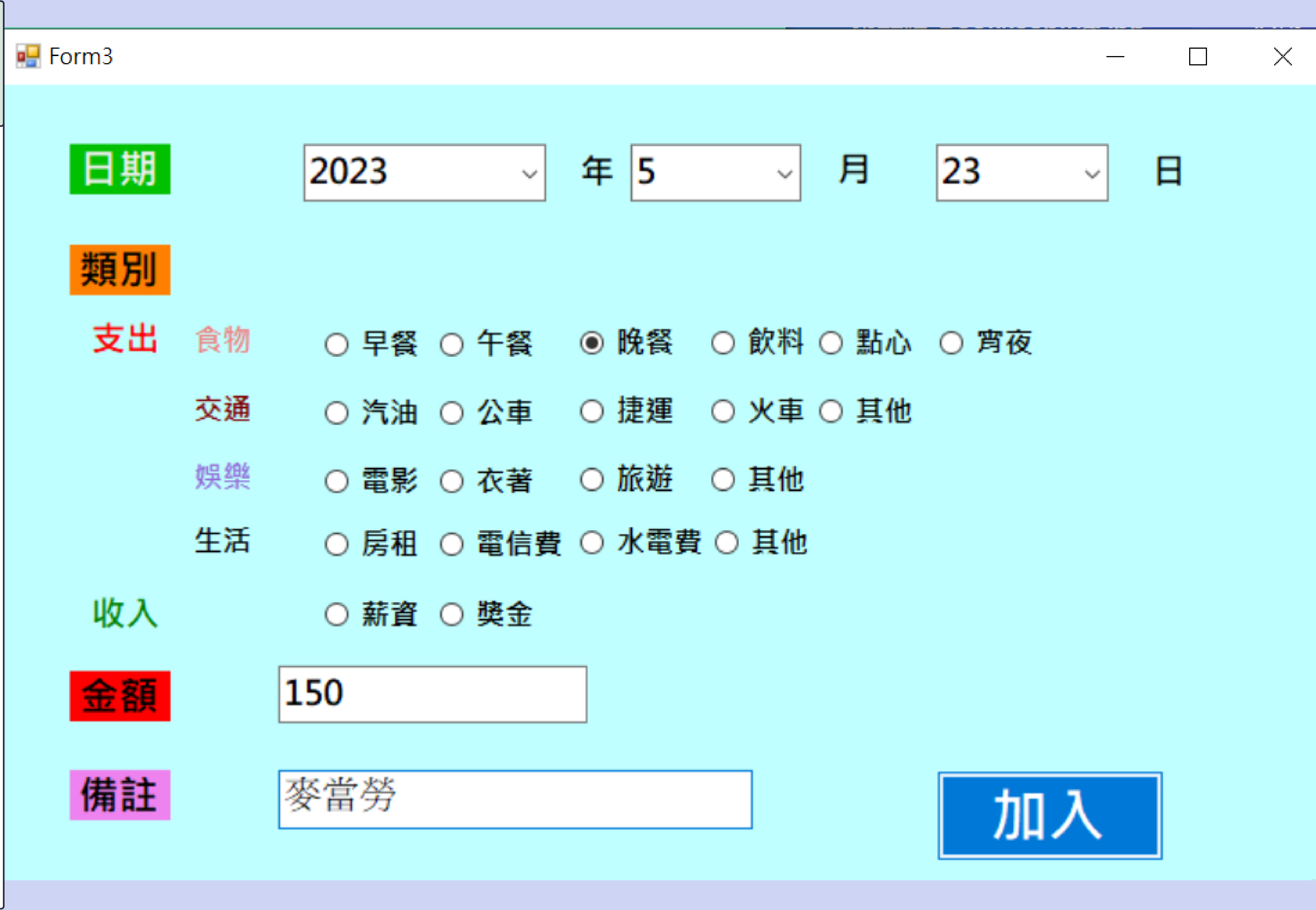
記帳軟體主畫面

-按新增可進入記帳頁面
-按檢視可查看各類別帳目資訊
-按離開則可離開應用程式



點選、輸入、加入

1. 選取日期及帳目類別
2. 輸入金額及備註
3. 加入及可將資料記錄至RECORD此CLASS之中



Form3

日期 2023 年 5 月 23 日

類別

支出 食物 ○ 早餐 ○ 午餐 ● 晚餐 ○ 飲料 ○ 點心 ○ 宵夜

交通 ○ 汽油 ○ 公車 ○ 捷運 ○ 火車 ○ 其他

娛樂 ○ 電影 ○ 衣著 ○ 旅遊 ○ 其他

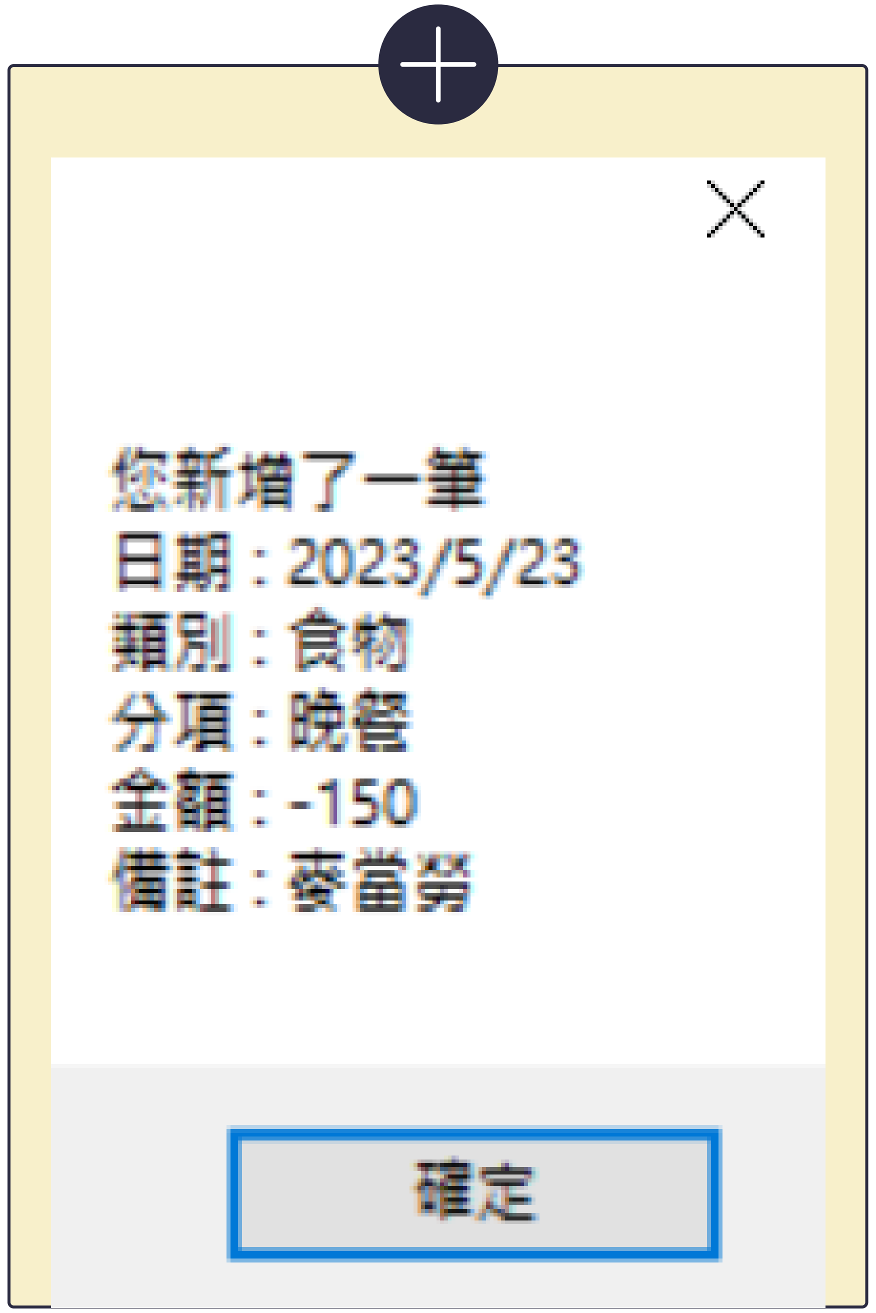
生活 ○ 房租 ○ 電信費 ○ 水電費 ○ 其他

收入 ○ 薪資 ○ 獎金

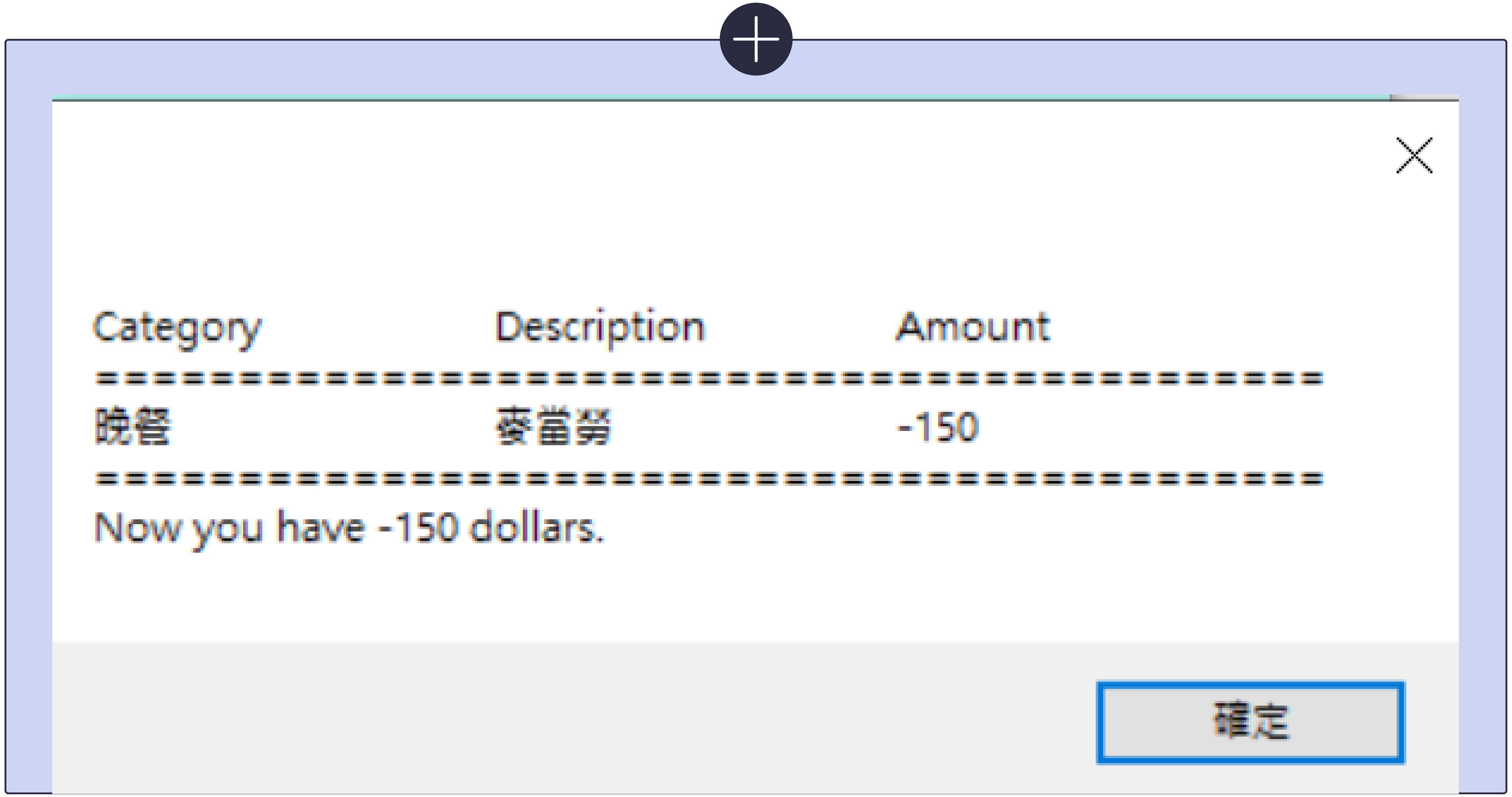
金額 150

備註 麥當勞

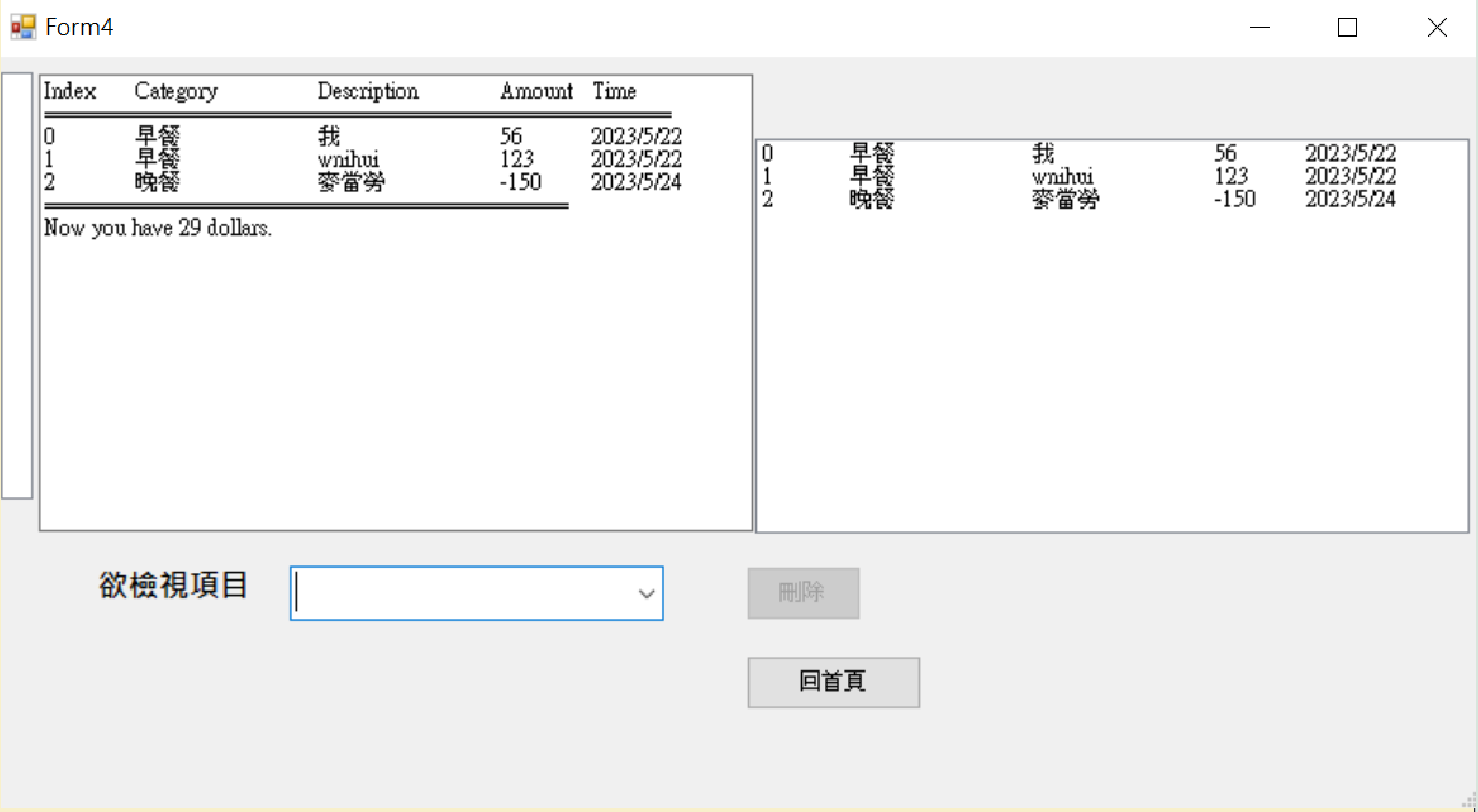
點選加入後的Message Box



您新增了一筆
日期 : 2023/5/23
類別 : 食物
分項 : 晚餐
金額 : -150
備註 : 麥當勞



```
Category          Description          Amount
=========================================================
晚餐              麥當勞               -150
=========================================================
Now you have -150 dollars.
```



Form4

```
Index    Category    Description    Amount  Time
0        早餐         我              56      2023/5/22
1        早餐         wnihui         123     2023/5/22
2        晚餐         麥當勞          -150    2023/5/24
Now you have 29 dollars.
```

```
0        早餐         我              56      2023/5/22
1        早餐         wnihui         123     2023/5/22
2        晚餐         麥當勞          -150    2023/5/24
```

欲檢視項目

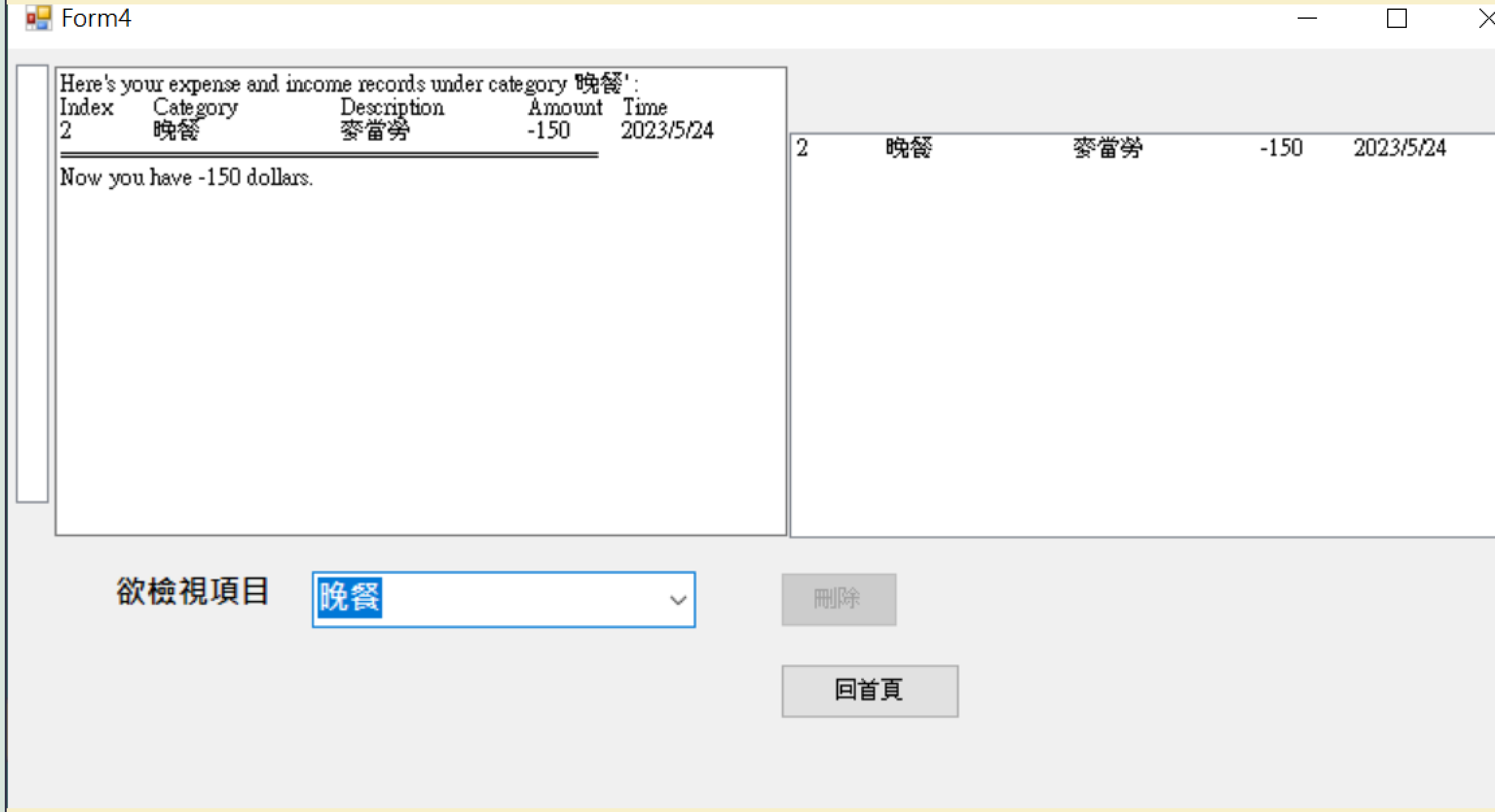
按下檢視按鈕

可呈現當前帳目記錄

自record抓取資料並呈現在listbox

如需檢視特殊帳務比較

可點選下方Combo box選取欲檢視項目，listbox會呈現選取項目的整批資料

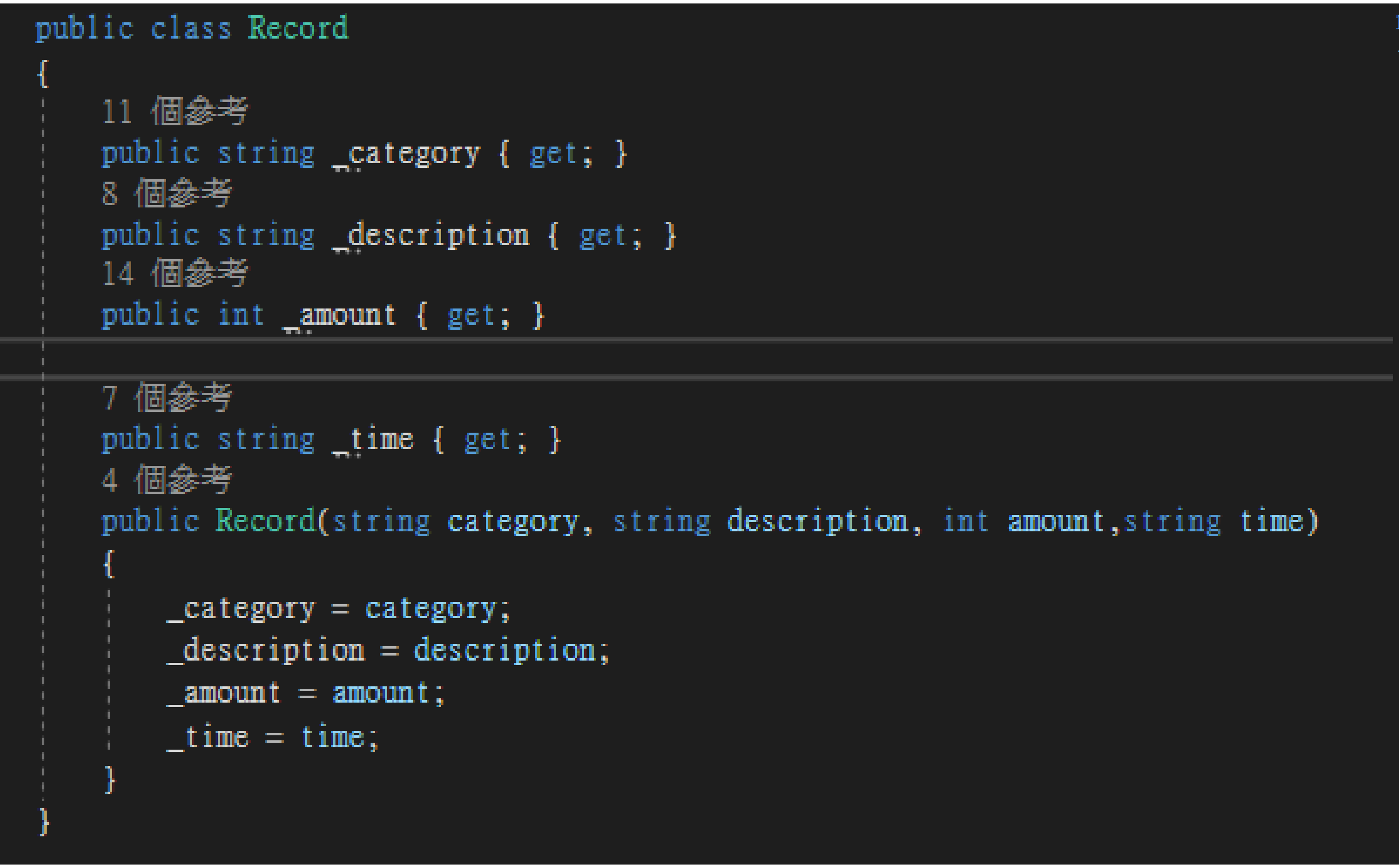


```
Here's your expense and income records under category 晚餐':
Index     Category          Description       Amount  Time
2         晚餐              麥當勞            -150    2023/5/24
═══════════════════════════════════════════════════
Now you have -150 dollars.
```

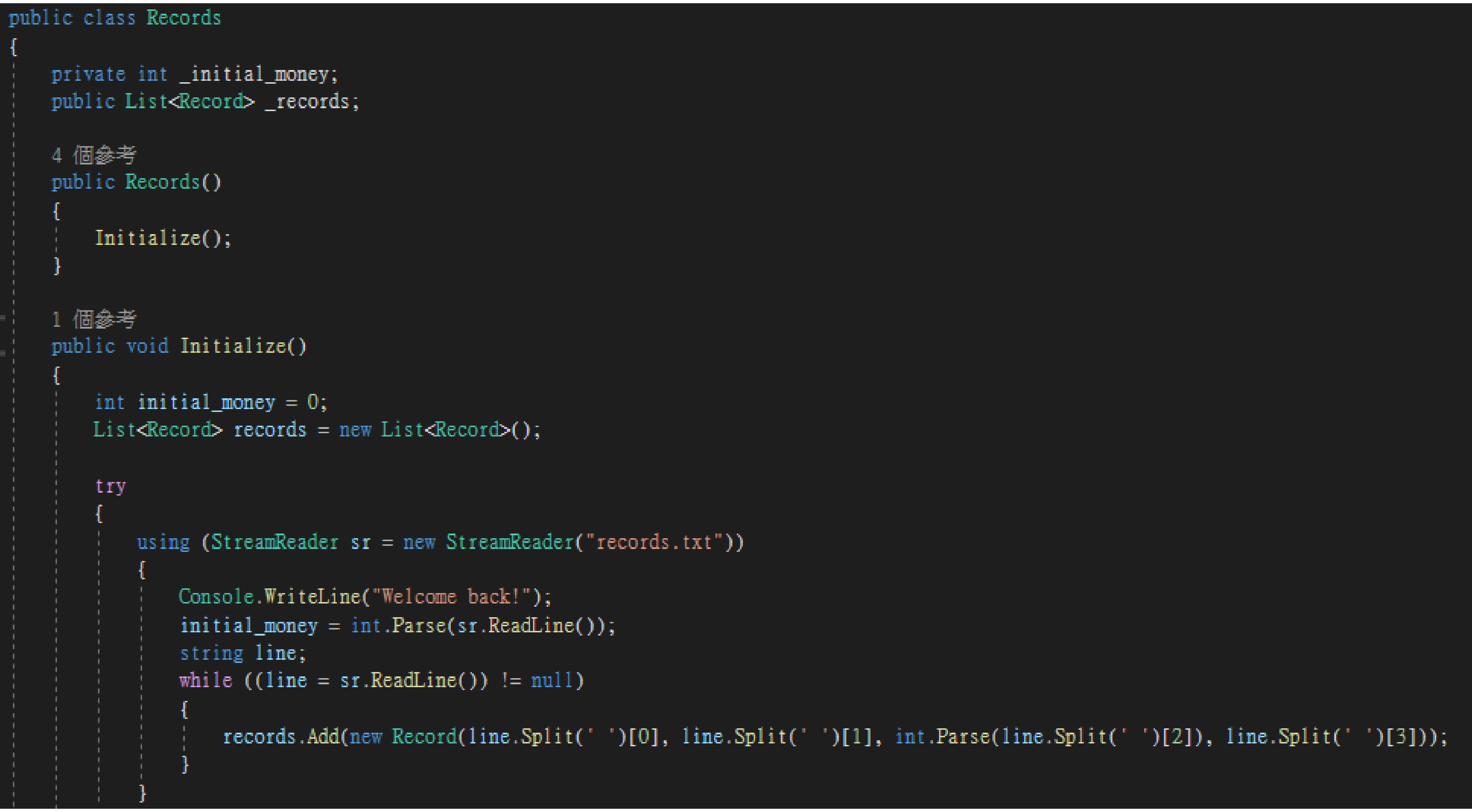
```
2        晚餐          麥當勞          -150      2023/5/24
```

欲檢視項目: 晚餐

Class

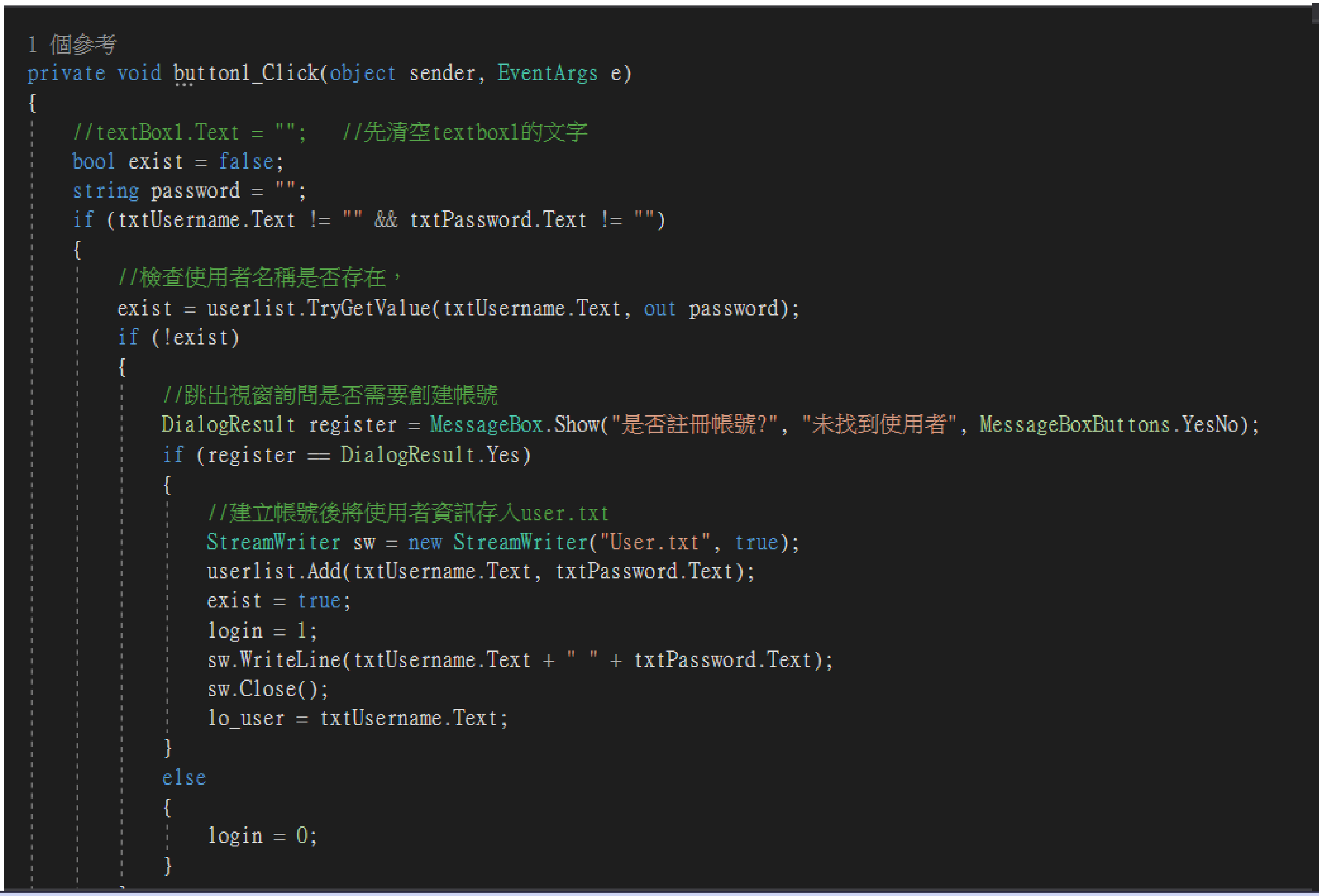


```
public class Record
{
    11 個參考
    public string _category { get; }
    8 個參考
    public string _description { get; }
    14 個參考
    public int _amount { get; }

    7 個參考
    public string _time { get; }
    4 個參考
    public Record(string category, string description, int amount,string time)
    {
        _category = category;
        _description = description;
        _amount = amount;
        _time = time;
    }
}
```

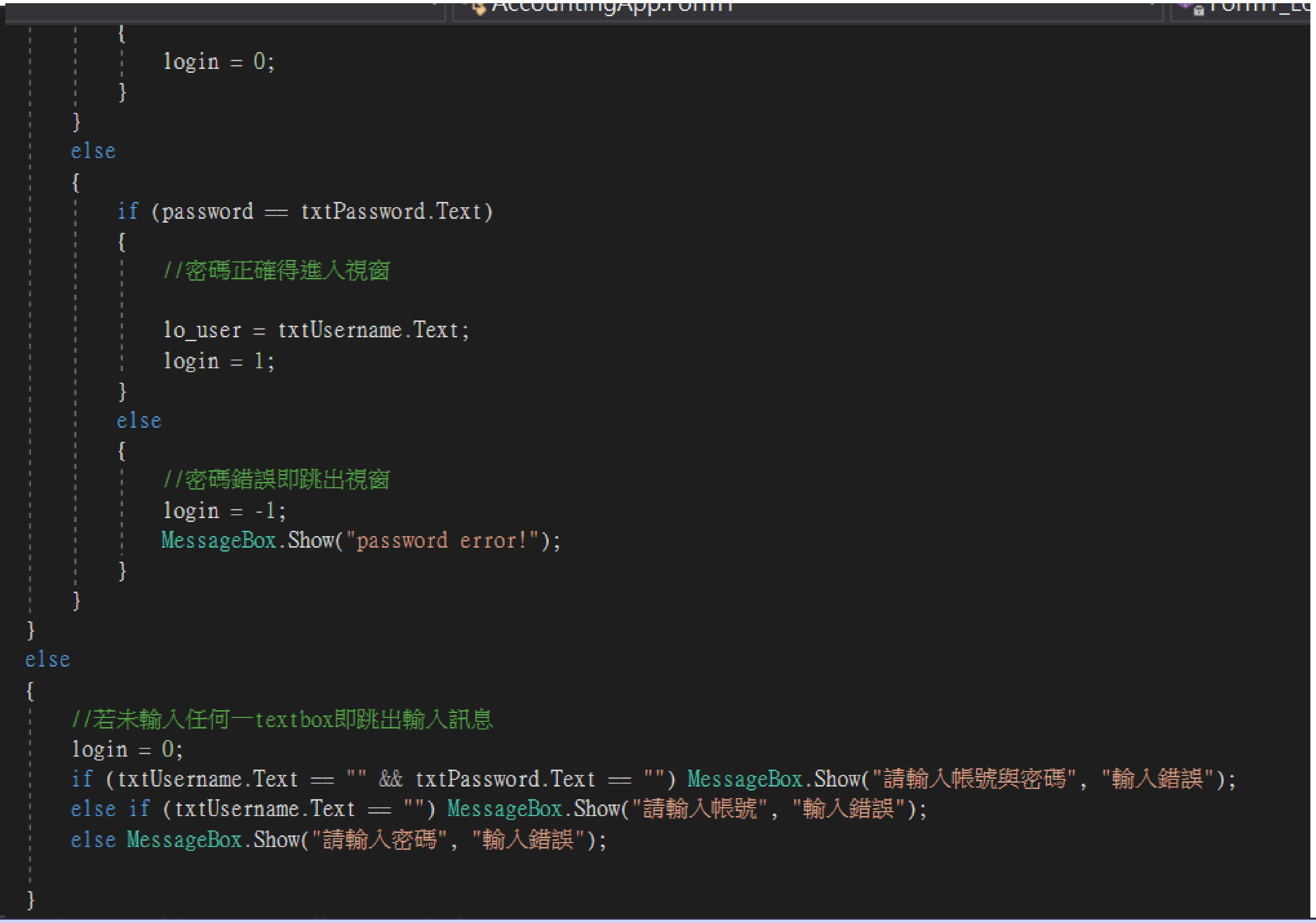


```
public class Records
{
    private int _initial_money;
    public List<Record> _records;

    4 個參考
    public Records()
    {
        Initialize();
    }

    1 個參考
    public void Initialize()
    {
        int initial_money = 0;
        List<Record> records = new List<Record>();

        try
        {
            using (StreamReader sr = new StreamReader("records.txt"))
            {
                Console.WriteLine("Welcome back!");
                initial_money = int.Parse(sr.ReadLine());
                string line;
                while ((line = sr.ReadLine()) != null)
                {
                    records.Add(new Record(line.Split(' ')[0], line.Split(' ')[1], int.Parse(line.Split(' ')[2]), line.Split(' ')[3]));
                }
            }
```

登入資料確認

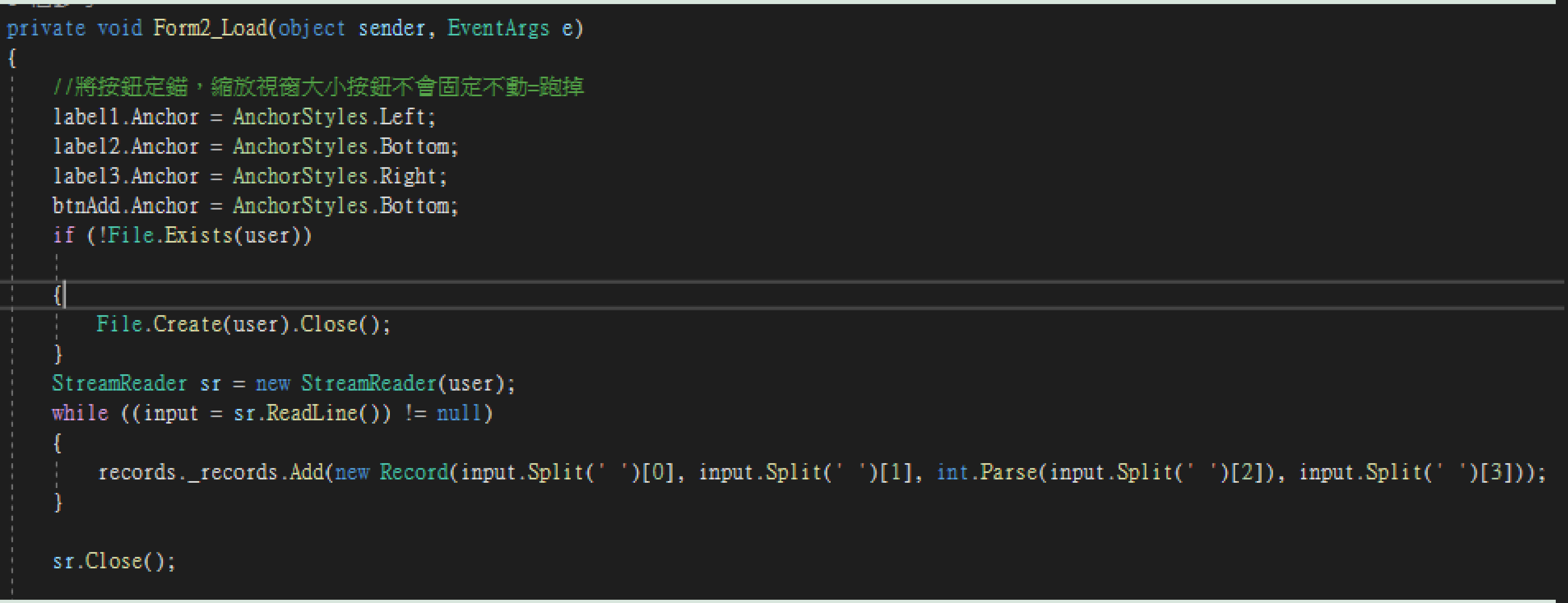


```
1 個參考
private void button1_Click(object sender, EventArgs e)
{
    //textBox1.Text = "";   //先清空textbox1的文字
    bool exist = false;
    string password = "";
    if (txtUsername.Text != "" && txtPassword.Text != "")
    {
        //檢查使用者名稱是否存在，
        exist = userlist.TryGetValue(txtUsername.Text, out password);
        if (!exist)
        {
            //跳出視窗詢問是否需要創建帳號
            DialogResult register = MessageBox.Show("是否註冊帳號?", "未找到使用者", MessageBoxButtons.YesNo);
            if (register == DialogResult.Yes)
            {
                //建立帳號後將使用者資訊存入user.txt
                StreamWriter sw = new StreamWriter("User.txt", true);
                userlist.Add(txtUsername.Text, txtPassword.Text);
                exist = true;
                login = 1;
                sw.WriteLine(txtUsername.Text + " " + txtPassword.Text);
                sw.Close();
                lo_user = txtUsername.Text;
            }
            else
            {
                login = 0;
            }
```

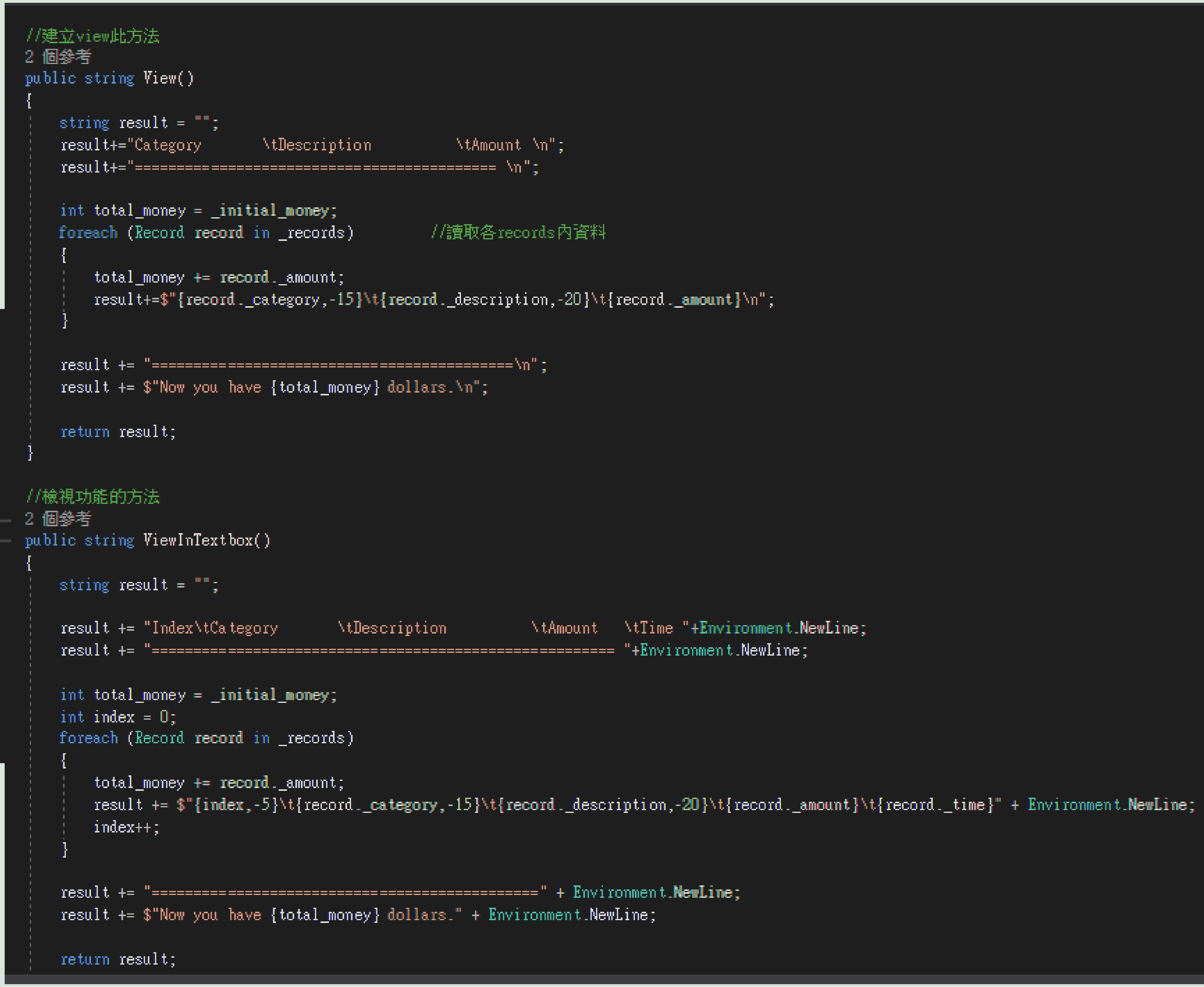


```
            {
                login = 0;
            }
        }
        else
        {
            if (password == txtPassword.Text)
            {
                //密碼正確得進入視窗

                lo_user = txtUsername.Text;
                login = 1;
            }
            else
            {
                //密碼錯誤即跳出視窗
                login = -1;
                MessageBox.Show("password error!");
            }
        }
    }
    else
    {
        //若未輸入任何一textbox即跳出輸入訊息
        login = 0;
        if (txtUsername.Text == "" && txtPassword.Text == "") MessageBox.Show("請輸入帳號與密碼", "輸入錯誤");
        else if (txtUsername.Text == "") MessageBox.Show("請輸入帳號", "輸入錯誤");
        else MessageBox.Show("請輸入密碼", "輸入錯誤");

    }
```

⊗ 檢查使用者是否有輸入過記錄以及檢視

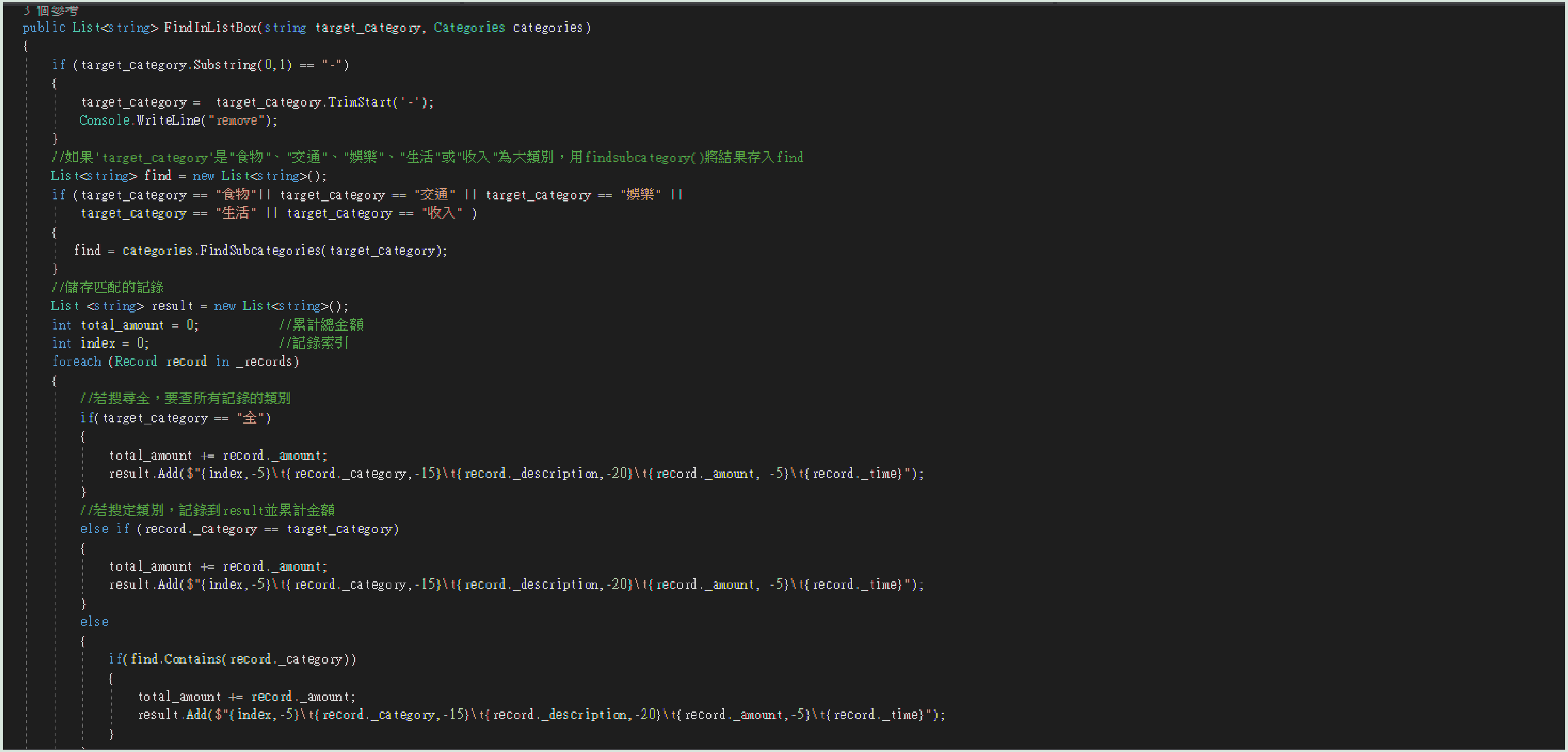


```
private void Form2_Load(object sender, EventArgs e)
{
    //將按鈕定錨，縮放視窗大小按鈕不會固定不動=跑掉
    label1.Anchor = AnchorStyles.Left;
    label2.Anchor = AnchorStyles.Bottom;
    label3.Anchor = AnchorStyles.Right;
    btnAdd.Anchor = AnchorStyles.Bottom;
    if (!File.Exists(user))

    {
        File.Create(user).Close();
    }
    StreamReader sr = new StreamReader(user);
    while ((input = sr.ReadLine()) != null)
    {
        records._records.Add(new Record(input.Split(' ')[0], input.Split(' ')[1], int.Parse(input.Split(' ')[2]), input.Split(' ')[3]));
    }

    sr.Close();
```



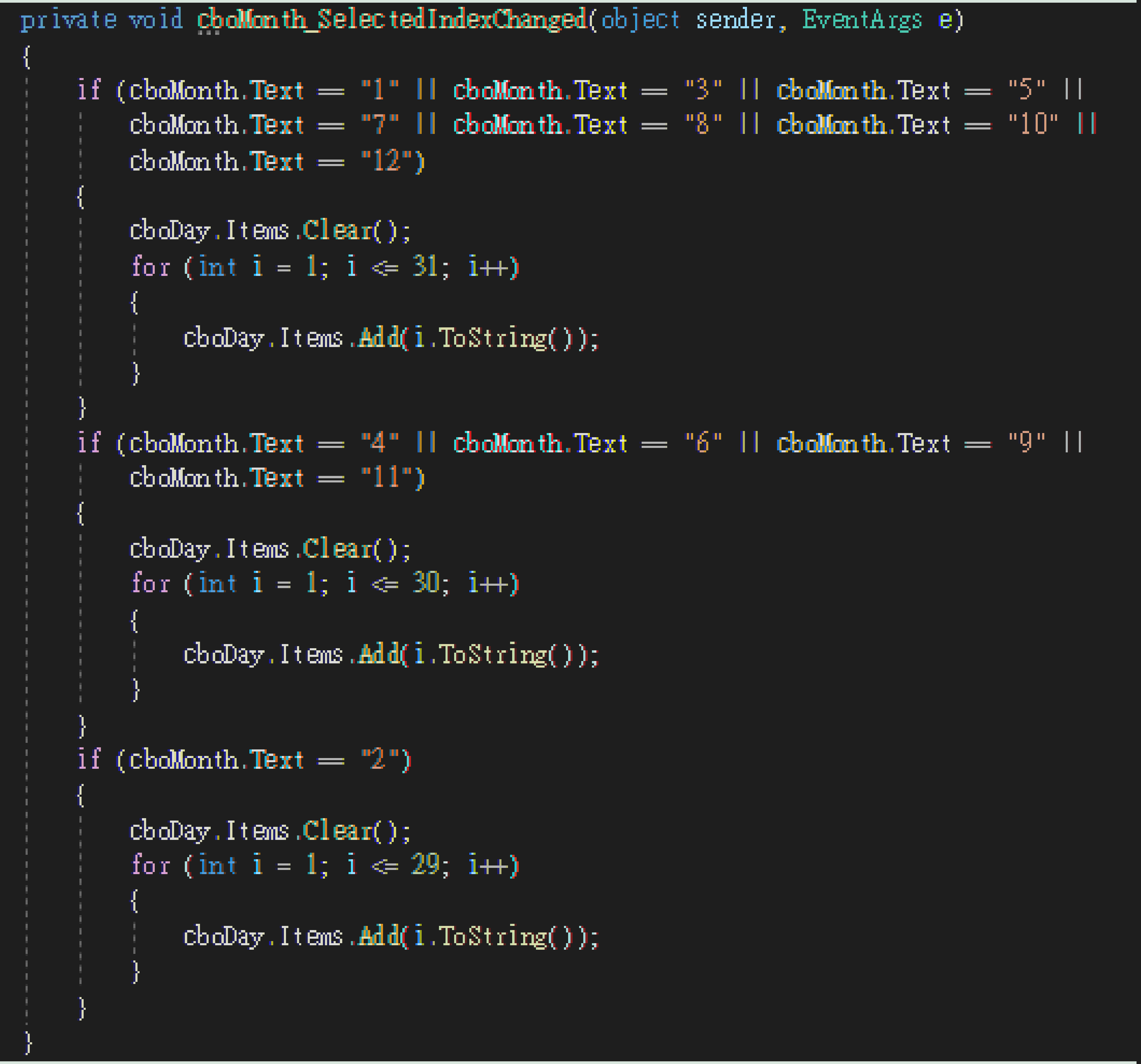
```
//建立view此方法
2 個參考
public string View()
{
    string result = "";
    result+="Category       \tDescription          \tAmount \n";
    result+="======================================= \n";

    int total_money = _initial_money;
    foreach (Record record in _records)         //讀取各records內資料
    {
        total_money += record._amount;
        result+=$"{record._category,-15}\t{record._description,-20}\t{record._amount}\n";
    }

    result += "=======================================\n";
    result += $"Now you have {total_money} dollars.\n";

    return result;
}

//檢視功能的方法
2 個參考
public string ViewInTextbox()
{
    string result = "";

    result += "Index\tCategory       \tDescription          \tAmount   \tTime "+Environment.NewLine;
    result += "================================================== "+Environment.NewLine;

    int total_money = _initial_money;
    int index = 0;
    foreach (Record record in _records)
    {
        total_money += record._amount;
        result += $"{index,-5}\t{record._category,-15}\t{record._description,-20}\t{record._amount}\t{record._time}" + Environment.NewLine;
        index++;
    }

    result += "===========================================" + Environment.NewLine;
    result += $"Now you have {total_money} dollars." + Environment.NewLine;

    return result;
```

檢視列的搜尋功能並將其細項一併處理

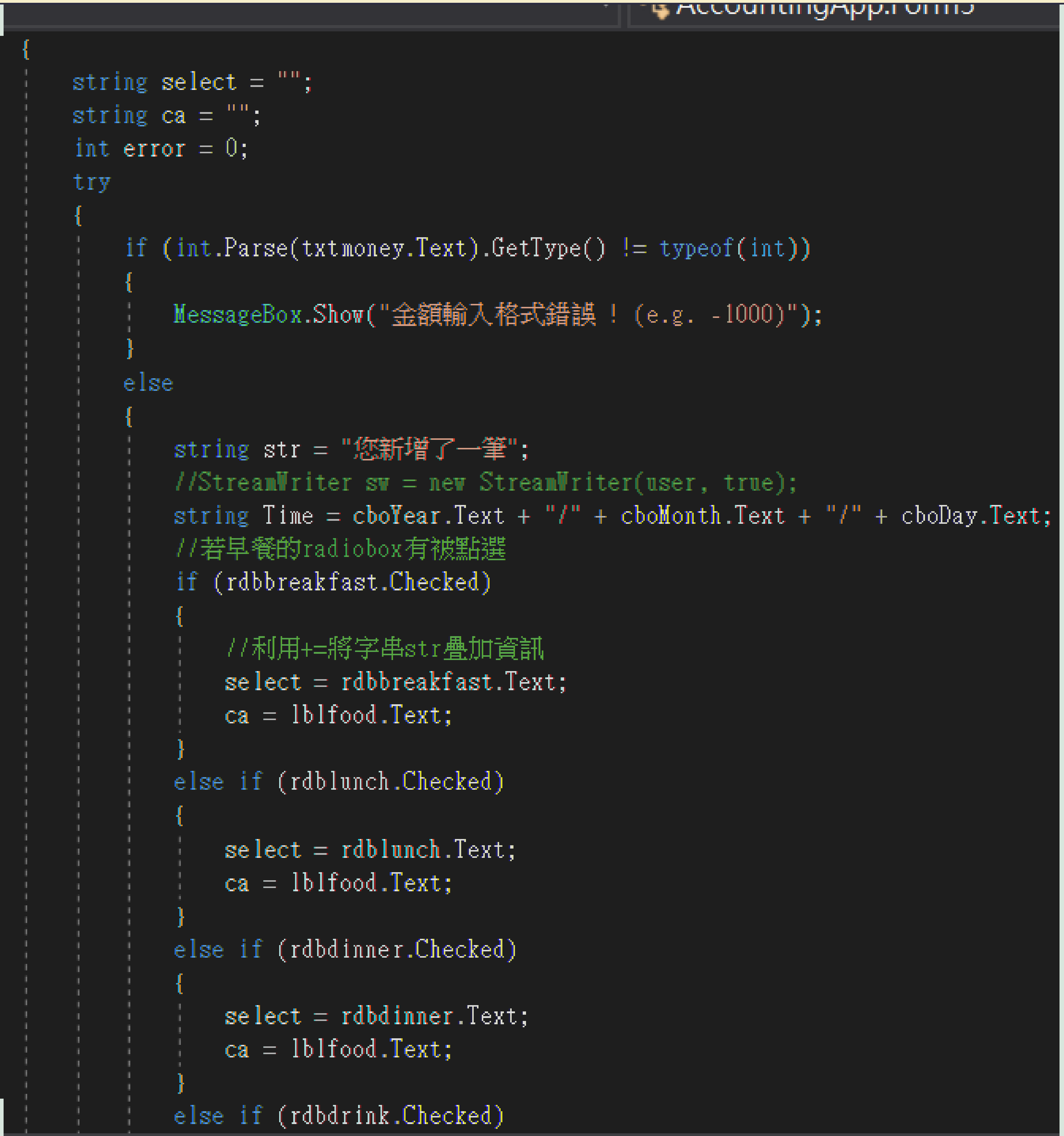


```
3 個參考
public List<string> FindInListBox(string target_category, Categories categories)
{
    if (target_category.Substring(0,1) == "-")
    {
        target_category =  target_category.TrimStart('-');
       Console.WriteLine("remove");
    }
    //如果'target_category'是"食物"、"交通"、"娛樂"、"生活"或"收入"為大類別，用findsubcategory()將結果存入find
    List<string> find = new List<string>();
    if (target_category == "食物"|| target_category == "交通" || target_category == "娛樂" ||
        target_category == "生活" || target_category == "收入" )
    {
      find = categories.FindSubcategories(target_category);
    }
    //儲存匹配的記錄
    List <string> result = new List<string>();
    int total_amount = 0;           //累計總金額
    int index = 0;                  //記錄索引
    foreach (Record record in _records)
    {
        //若搜尋全，要查所有記錄的類別
        if(target_category == "全")
        {
            total_amount += record._amount;
            result.Add($"{index,-5}\t{record._category,-15}\t{record._description,-20}\t{record._amount, -5}\t{record._time}");
        }
        //若搜定類別，記錄到result並累計金額
        else if (record._category == target_category)
        {
            total_amount += record._amount;
            result.Add($"{index,-5}\t{record._category,-15}\t{record._description,-20}\t{record._amount, -5}\t{record._time}");
        }
        else
        {
            if(find.Contains(record._category))
            {
                total_amount += record._amount;
                result.Add($"{index,-5}\t{record._category,-15}\t{record._description,-20}\t{record._amount,-5}\t{record._time}");
            }
```

新增完項目後將跳出視窗知會使用者

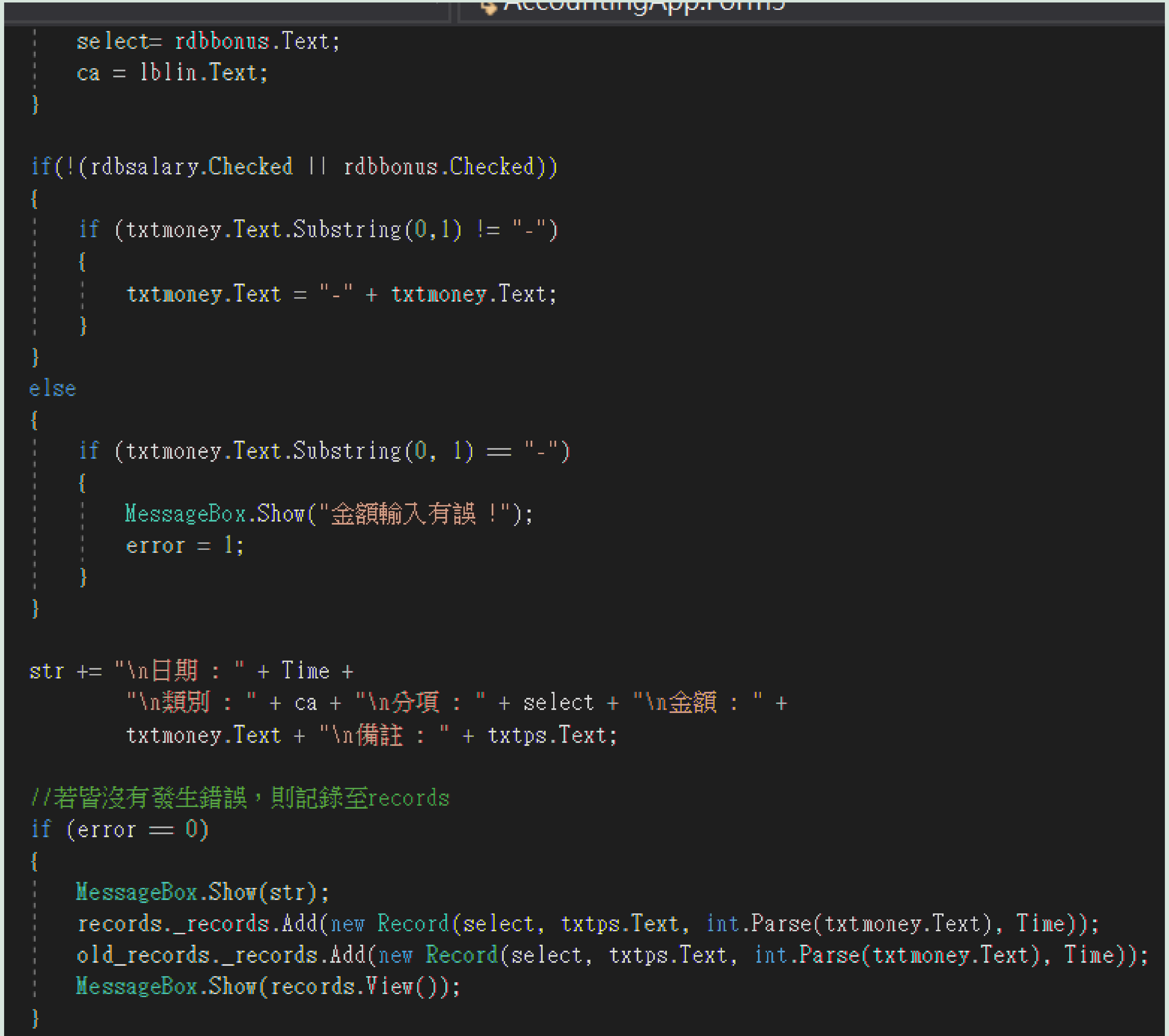


```
private void cboMonth_SelectedIndexChanged(object sender, EventArgs e)
{
    if (cboMonth.Text == "1" || cboMonth.Text == "3" || cboMonth.Text == "5" ||
        cboMonth.Text == "7" || cboMonth.Text == "8" || cboMonth.Text == "10" ||
        cboMonth.Text == "12")
    {
        cboDay.Items.Clear();
        for (int i = 1; i <= 31; i++)
        {
            cboDay.Items.Add(i.ToString());
        }
    }
    if (cboMonth.Text == "4" || cboMonth.Text == "6" || cboMonth.Text == "9" ||
        cboMonth.Text == "11")
    {
        cboDay.Items.Clear();
        for (int i = 1; i <= 30; i++)
        {
            cboDay.Items.Add(i.ToString());
        }
    }
    if (cboMonth.Text == "2")
    {
        cboDay.Items.Clear();
        for (int i = 1; i <= 29; i++)
        {
            cboDay.Items.Add(i.ToString());
        }
    }
}
```



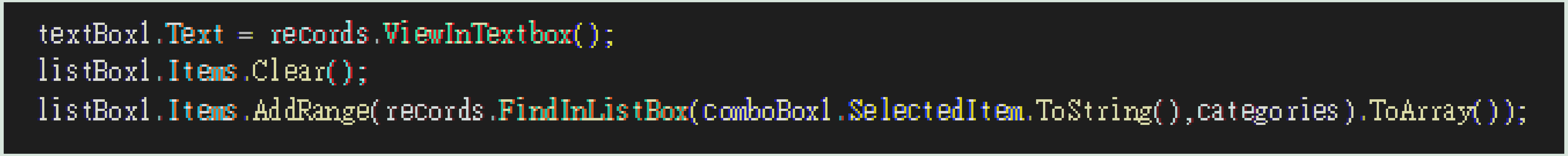
```
{
    string select = "";
    string ca = "";
    int error = 0;
    try
    {
        if (int.Parse(txtmoney.Text).GetType() != typeof(int))
        {
            MessageBox.Show("金額輸入格式錯誤！(e.g. -1000)");
        }
        else
        {
            string str = "您新增了一筆";
            //StreamWriter sw = new StreamWriter(user, true);
            string Time = cboYear.Text + "/" + cboMonth.Text + "/" + cboDay.Text;
            //若早餐的radiobox有被點選
            if (rdbbreakfast.Checked)
            {
                //利用+=將字串str疊加資訊
                select = rdbbreakfast.Text;
                ca = lblfood.Text;
            }
            else if (rdblunch.Checked)
            {
                select = rdblunch.Text;
                ca = lblfood.Text;
            }
            else if (rdbdinner.Checked)
            {
                select = rdbdinner.Text;
                ca = lblfood.Text;
            }
            else if (rdbdrink.Checked)
```

新增完項目後將跳出視窗知會使用者



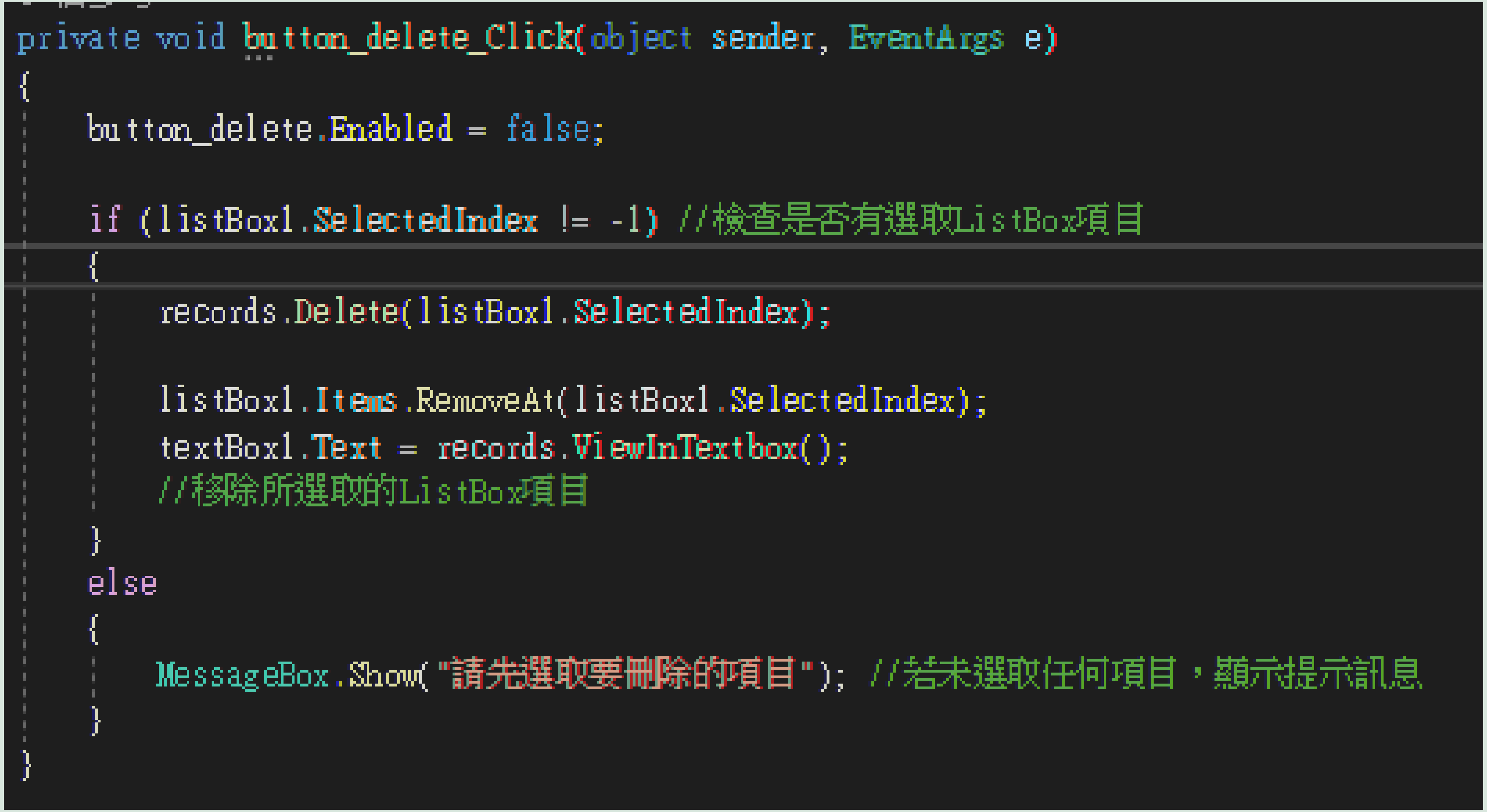
```
    select= rdbbonus.Text;
    ca = lblin.Text;
}

if(!(rdbsalary.Checked || rdbbonus.Checked))
{
    if (txtmoney.Text.Substring(0,1) != "-")
    {
        txtmoney.Text = "-" + txtmoney.Text;
    }
}
else
{
    if (txtmoney.Text.Substring(0, 1) == "-")
    {
        MessageBox.Show("金額輸入有誤！");
        error = 1;
    }
}

str += "\n日期：" + Time +
        "\n類別：" + ca + "\n分項：" + select + "\n金額：" +
        txtmoney.Text + "\n備註：" + txtps.Text;

//若皆沒有發生錯誤，則記錄至records
if (error == 0)
{
    MessageBox.Show(str);
    records._records.Add(new Record(select, txtps.Text, int.Parse(txtmoney.Text), Time));
    old_records._records.Add(new Record(select, txtps.Text, int.Parse(txtmoney.Text), Time));
    MessageBox.Show(records.View());
}
```

檢視欲搜尋項目加入listbox



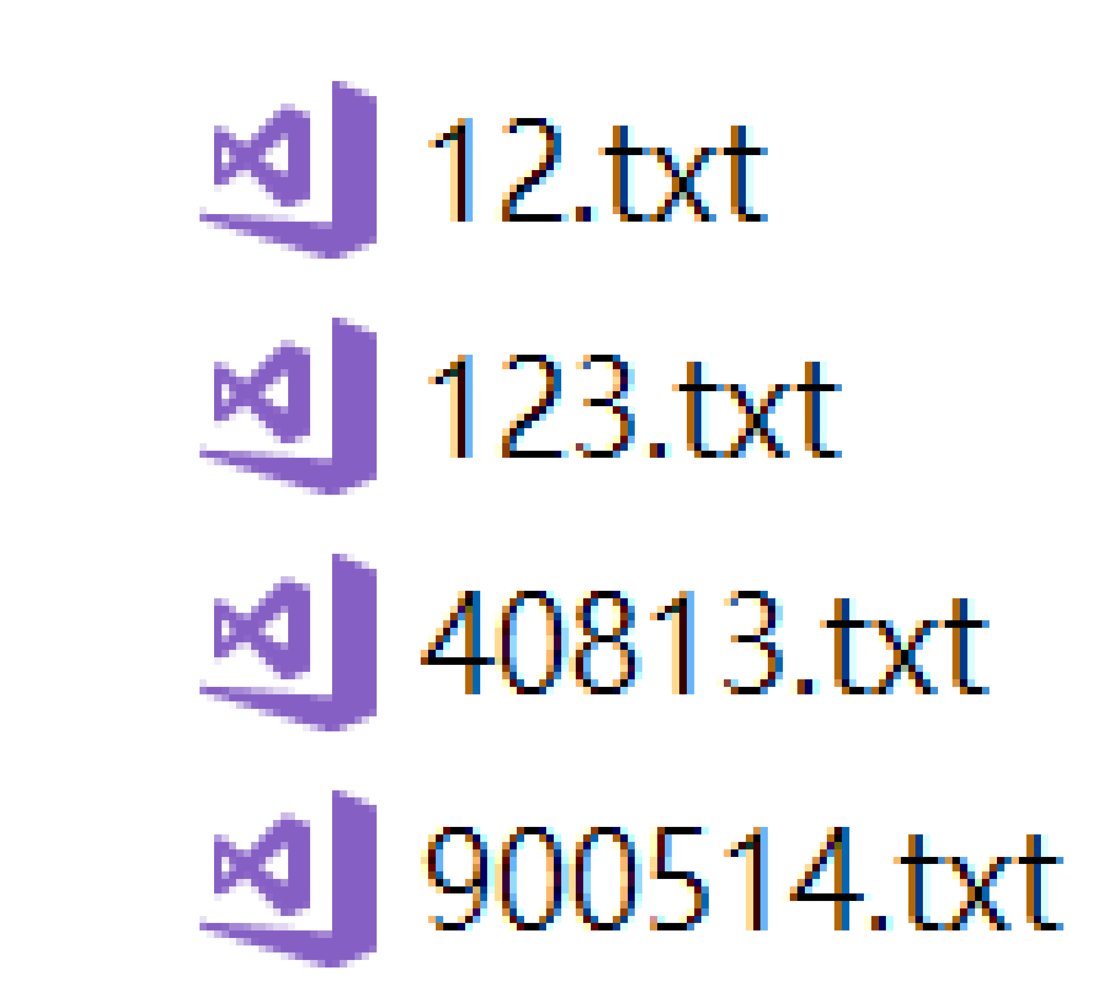
```
textBox1.Text = records.ViewInTextbox();
listBox1.Items.Clear();
listBox1.Items.AddRange(records.FindInListBox(comboBox1.SelectedItem.ToString(),categories).ToArray());
```

可直接在listbox刪除資料



```
private void button_delete_Click(object sender, EventArgs e)
{
    button_delete.Enabled = false;

    if (listBox1.SelectedIndex != -1) //檢查是否有選取ListBox項目
    {
        records.Delete(listBox1.SelectedIndex);

        listBox1.Items.RemoveAt(listBox1.SelectedIndex);
        textBox1.Text = records.ViewInTextbox();
        //移除所選取的ListBox項目
    }
    else
    {
       MessageBox.Show("請先選取要刪除的項目"); //若未選取任何項目，顯示提示訊息
    }
}
```

資料儲存



12.txt
123.txt
40813.txt
900514.txt

使用者帳款輸出
可重覆讀檔與覆寫
新增與刪除皆可更新於此
資料永久儲存

User.csv

使用者帳密輸出

實際操作

謝謝聆聽！