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1
2 using Microsoft.Win32;
3 using System;
4 using System.Collections.Generic;
5 using System.IO;
6 using System.Net.Http.Json;
7 using System.Text.Encodings.Web;
8 using System.Text.Json;
9 using System.Text.Json.Serialization;
10 using System.Text.Unicode;
11 using System.Windows;
12
13 namespace ClassLesson
14 {
15     public partial class MainWindow : Window
16     {
17         List<Student> students = new List<Student>();
18         Student selectedStudent = null;
19
20         List<Course> courses = new List<Course>();
21         Course selectedCourse = null;
22
23         List<Teacher> teachers = new List<Teacher>();
24         Teacher selectedTeacher = null;
25
26         List<Record> records = new List<Record>();
27         Record selectedRecord = null;
28
29         public MainWindow()
30         {
31             InitializeComponent();
32
33             InitializeStudent();
34
35             InititalizeCourse();
36         }
37
38         private void InititalizeCourse()
39         {
40             Teacher teacher1 = new Teacher() { TeacherName = "陳定宏" };
41             teacher1.TeachingCourses.Add(new Course(teacher1) { CourseName = "視窗程式設計", OpeningClass = "五專三甲", Point = 3, Type = "必修" });
42             teacher1.TeachingCourses.Add(new Course(teacher1) { CourseName = "視窗程式設計", OpeningClass = "四技二甲", Point = 3, Type = "選修" });
43             teacher1.TeachingCourses.Add(new Course(teacher1) { CourseName = "視窗程式設計", OpeningClass = "四技二乙", Point = 3, Type = "選修" });
44             teacher1.TeachingCourses.Add(new Course(teacher1) { CourseName = "視窗程式設計", OpeningClass = "四技二丙", Point = 3, Type = "選修" });
45
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46 Teacher teacher2 = new Teacher() { TeacherName = "陳福坤" };
47 teacher2.TeachingCourses.Add(new Course(teacher2)
    { CourseName = "計算機概論", OpeningClass = "四技一丙",
      Point = 2, Type = "必修" });
48 teacher2.TeachingCourses.Add(new Course(teacher2)
    { CourseName = "計算機概論", OpeningClass = "四技一甲一乙",
      Point = 2, Type = "必修" });
49 teacher2.TeachingCourses.Add(new Course(teacher2)
    { CourseName = "數位系統導論", OpeningClass = "四技一乙",
      Point = 3, Type = "必修" });

50
51 Teacher teacher3 = new Teacher() { TeacherName = "許子衡" };
52 teacher3.TeachingCourses.Add(new Course(teacher3)
    { CourseName = "Android程式設計", OpeningClass = "四技資工三
      甲等合開", Point = 3, Type = "選修" });
53 teacher3.TeachingCourses.Add(new Course(teacher3)
    { CourseName = "人工智慧與雲端運算", OpeningClass = "四技資工
      四甲等合開", Point = 3, Type = "選修" });
54 teacher3.TeachingCourses.Add(new Course(teacher3)
    { CourseName = "動態程式語言", OpeningClass = "五專資工三甲",
      Point = 3, Type = "系定選修" });

55
56 teachers.Add(teacher1);
57 teachers.Add(teacher2);
58 teachers.Add(teacher3);
59
60 tvTeacher.ItemsSource = teachers;
61
62 foreach (Teacher teacher in teachers)
63 {
64     foreach (Course course in teacher.TeachingCourses)
65     {
66         courses.Add(course);
67     }
68 }
69 lbCourse.ItemsSource = courses;
70 }
71
72 private void InitializeStudent()
73 {
74     string jsonFilePath = "C:\\Users\\owner\\Documents\\zhuang-
      c-sharp\\ClassLesson\\score.json";
75     string jsonContents = System.IO.File.ReadAllText
      (jsonFilePath);
76
77     List<Student> studentsFromJson =
      JsonSerializer.Deserialize<List<Student>>(jsonContents);
78
79     foreach (var student in studentsFromJson)
80     {
81         students.Add(new Student { StudentId =
          student.StudentId, StudentName =
          student.StudentName });

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82     }
83
84     cmbStudent.ItemsSource = students;
85     cmbStudent.SelectedIndex = 0;
86
87 }
88
89 private void cmbStudent_SelectionChanged(object sender,           ↗
    System.Windows.Controls.SelectionChangedEventArgs e)
90 {
91     selectedStudent = (Student)cmbStudent.SelectedItem;
92     labelStatus.Content = $"選取學生：{selectedStudent.ToString()}"  ↗
93 }
94
95 private void tvTeacher_SelectedItemChanged(object sender,       ↗
    RoutedPropertyChangedEventArgs<object> e)
96 {
97     if (tvTeacher.SelectedItem is Teacher)
98     {
99         selectedTeacher = (Teacher)tvTeacher.SelectedItem;
100        labelStatus.Content = $"選取教師：                          ↗
            {selectedTeacher.ToString()}";
101    }
102    else if (tvTeacher.SelectedItem is Course)
103    {
104        selectedCourse = (Course)tvTeacher.SelectedItem;
105        labelStatus.Content = selectedCourse.ToString();
106    }
107 }
108
109 private void btnRegister_Click(object sender, RoutedEventArgs     ↗
    e)
110 {
111     if (selectedStudent == null || selectedCourse == null)
112     {
113         MessageBox.Show("請選取學生或課程");
114         return;
115     }
116     else
117     {
118         Record newRecord = new Record() { SelectedStudent =       ↗
            selectedStudent, SelectedCourse = selectedCourse };
119
120         foreach (Record r in records)
121         {
122             if (r.Equals(newRecord))
123             {
124                 MessageBox.Show($"{selectedStudent.StudentName} 已選取 {selectedCourse.CourseName}");
125                 return;
126             }
127         }
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128
129         records.Add(newRecord);
130         lvRecord.ItemsSource = records;
131         lvRecord.Items.Refresh();
132     }
133 }
134
135 private void lbCourse_SelectionChanged(object sender,           ↗
    System.Windows.Controls.SelectionChangedEventArgs e)
136 {
137     selectedCourse = (Course)lbCourse.SelectedItem;
138     labelStatus.Content = selectedCourse.ToString();
139 }
140
141 private void lvRecord_SelectionChanged(object sender,           ↗
    System.Windows.Controls.SelectionChangedEventArgs e)
142 {
143     selectedRecord = (Record)lvRecord.SelectedItem;
144     if (selectedRecord != null) labelStatus.Content =         ↗
        selectedRecord.ToString();
145 }
146
147 private void btnWithdrawl_Click(object sender, RoutedEventArgs   ↗
    e)
148 {
149     if (selectedRecord != null)
150     {
151         records.Remove(selectedRecord);
152         lvRecord.ItemsSource = records;
153         lvRecord.Items.Refresh();
154     }
155 }
156 private void btnSave_Click(object sender, RoutedEventArgs e)
157 {
158     SaveFileDialog saveFileDialog = new SaveFileDialog();
159     saveFileDialog.Filter = "Json文件 (*.json)|*.json|All Files  ↗
        (*.*)|*.*";
160     saveFileDialog.Title = "儲存學生選課紀錄";
161
162     if (saveFileDialog.ShowDialog() == true)
163     {
164         JsonSerializerOptions options = new                     ↗
            JsonSerializerOptions
165         {
166             Encoder = JavaScriptEncoder.Create                   ↗
                (UnicodeRanges.All),
167             ReferenceHandler = ReferenceHandler.Preserve,
168             WriteIndented = true
169         };
170
171         string jsonString = JsonSerializer.Serialize(records,     ↗
            options);
172         File.WriteAllText(saveFileDialog.FileName, jsonString);
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173         }  
174     }  
175 }  
176 }
```