TEST - Exam Rich Internet Applications

19.01.2011

Name:

Matriculation Number:

Time: 120 minutes

No	Question	Points	
1.	Name 4 client-side technologies for creating a RIA application. Give one rating regarding their cross-platform compatibility or license. (e.g. „proprietary“, „open-source“, „runs only on“…)	8	
2.	What is HTML?	4	
3.	Explain the MVC pattern. Make a sketch to illustrate your explanation. Why is it useful? In which cases should we use it? In which cases should we use another pattern?	20	
4.	Correct the code snipped in “source code 1”. (There are three errors)	9	
5.	What is a Unit Test? (4) When should we use it? (3)	7	
6.	Plan and create a simple contacts manager. The business layer should have only one table / one repository. You can use pseudo-code (C-style, please!), as long as it clear what you want to express. a) Plan the table with its data types. (8) b) Plan the POCO / POJO (data holding object). (4) c) Create a repository with all CRUD operations. (10) d) Create a controller. (5) e) Explain what you have done and why you have done it that way. (5)	32	
	TOTAL:	**80**	

Extra points:

Plan and write a Unit Test for your contacts manager.
Test 4 methods of your controller or repository. You can use pseudo-code. (10)

Source code 1

```
namespace WebNoteMvc.Models
{
    using System;
    using System.Collections.Generic;
    using System.Linq;

    /// <summary>
    /// Sample Repository
    /// </summary>
    public partial class WebNoteRepository : IWebNoteRepository
    {
        /// <summary>
        /// Gets all notes from DB
        /// </summary>
        /// <returns>all notes from DB</returns>
        public void GetAllNotes()
        {
            return this.Context.Notes.ToList();
        }

        /// <summary>
        /// Gets one note from DB
        /// </summary>
        /// <param name="id">The id of the note to show.</param>
        /// <returns>notes from DB</returns>
        public Note GetNote(int id)
        {
            Note noteToShow = (from n in this.Context.Notes
                               where n.NoteId == 1
                               select n).FirstOrDefault();

            return noteToShow;
        }

        /// <summary>
        /// Adds a new note to the DB.
        /// </summary>
        /// <param name="noteToAdd">The note to add.</param>
        public void AddNote(Note noteToAdd)
        {
            noteToAdd.Added = DateTime.Now;
            this.Context.Notes.AddObject("fooobar");
            this.Context.SaveChanges();
        }
}
```

HINT: in the real exam there would be 20 “learning-only” question points!