ASP.NET MVC Practical Exam 2016 - Telerik Academy Telerik®



UserVoice-like Web Application

You are assigned to design and implement an application for collecting ideas (suggestions) from users.

You will be developing a web application similar to https://visualstudio.uservoice.com/.

The system should be implemented using ASP.NET MVC 5.

Your project should be based on the template we have created during one of the workshops:

https://github.com/NikolayIT/ASP.NET-MVC-Template

Use Entity Framework as ORM engine and MS SQL Server as database storage engine and use code-first approach to access your data. Use repositories (or service layer) for abstracting the database layer.

Your project should run after a "copy/paste" deployment and after changing the connection string in the Web.config file with an appropriate value. For convenience use "DefaultConnection" as the name for your connection string.

There will be 2 types of users in the system: anonymous users (not logged-in) and registered users.

Anonymous users should be able to browse, search and add ideas in the site. They should also be able to comment and vote for ideas.

Registered (logged-in) users should be able to edit, and delete comments and ideas.

<u>Data Layer and Common Features (15 points)</u>

Design a simple data layer to hold users, ideas (with title, plain-text (no HTML) description, created on datetime and author IP address), votes for ideas (with IP, vote points) and comments for ideas (with plain-text content, email of the author, created on, IP).

4 points

- Fill (seed) the database with sample data.
 - 1 user with email (username) "user1@site.com" and password "user1".
 - o Copy-paste the top 15 ideas from https://visualstudio.uservoice.com/ to the database.
 - At least 10 comments for each idea.
 - At least 100 random votes with random IPs and random vote points (between 1 and 3) for each of the ideas.

5 points

- In the navigation (menu) when user is authorized display links for administering comments and ideas. 1 point
- Configure the ASP.NET Identity System to enable user management functionality (register / login / logout should work properly).
 - o Disable all password requirements. "user1" should be a valid password. The minimum required length of the password should be 5.

1 point

Error handling – in case of errors (e.g. DB connection lost, incorrect request, 404, etc.), an appropriate error message should be displayed. You are free to decide how exactly.

2 points

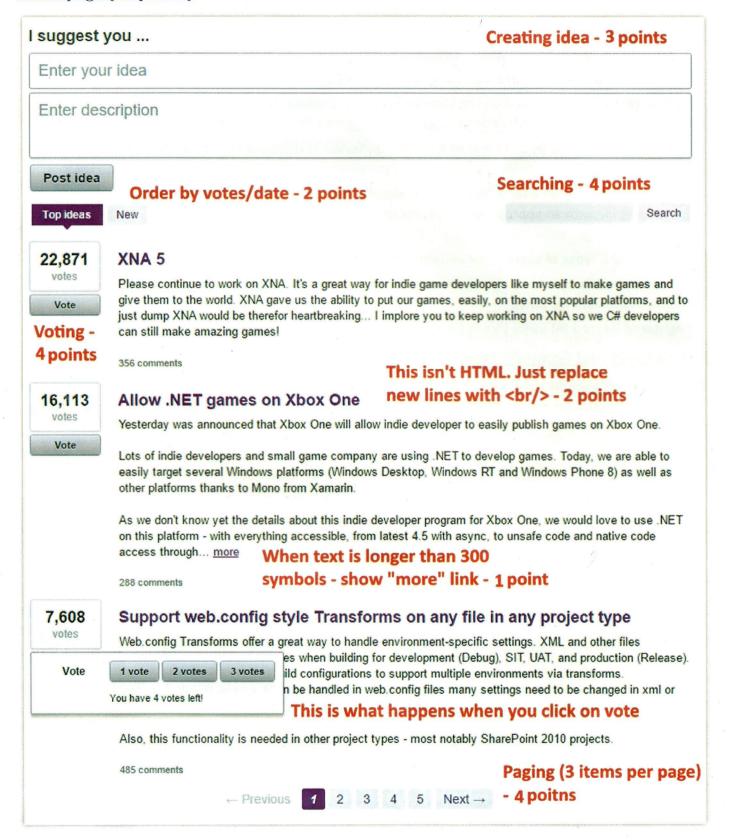
User interface (UI) – the user interface should be usable enough. It is not needed to be beautiful. You may use Bootstrap if you will.

2 points

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Home page (29 points)



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- Each IP address has only 10 votes available. Once submitted, the vote cannot be edited. (3 points)
- Implement voting and creating ideas with AJAX. Don't forget to save user's IP address. (3 points)
- Ordering, searching and paging should be used in any combination together. (3 points)

Idea Details Page (16 points)

5,873 votes

Bring back Macros

I am amazed you've decided to remove Macros from Visual Studio. Not only are they useful for general programming, but they're a great way to be introduced to the Visual Studio APIs. If you are unwilling to put in the development time towards them, please release the source code and let the community maintain it as an extension.

March 05, 2012

Display idea info, votes and comments count - 3 points

648 comments

Add a comment...

Adding comments - 3 points Validation - 2 points

Your email address

Post comment

List comments - 3 points



lva*******@gma**.com commented February 17, 2016 10:22

Are the survey results available somewhere? Hide emails - 2 points Is there something at all planned for VS2015?



Don******@tel****.com commented February 14, 2016 15:23

Yes.. The macros do not save all the actions. Lets imagine that I want to save a macro than includes searching for an specific word, substituting it, etc... If I save the macro and execute it it wont repeat the action to search the next instance of the word, just the typing.



Evi**********@tei****.com commented January 31, 2016 20:32

Macros aren't used often, but when you are creating or updating large volumes of code, they save HOURS and HOURS of tedious work.

Please bring back as a built in feature! Thanks.



Zdr******@tel****.com commented January 21, 2016 21:17

It's been nearly four months since the survey and still no indication of intent. I'm pretty certain that 100% of the surveys want macros back and I'm also pretty sure that most of them would like to see it open-sourced. It's seeming more and more like the survey was a waste of time.

-- Previous



Paging - 3 points

- You may implement posting and displaying comments however you like (with or without AJAX)
- Display 4 items per page (order items by newest first). Content and email address of the comments are required. Email address should be a valid email address.
- Implementation of voting on this page is not required

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Administrator Area (20 points)

Create pageable, filterable and sortable KendoUI Grid administration for displaying the comments. The grid should support editing of the comment's email and content. Implement deleting of comments. Creating comments from the grid is not required.

9 points

Create pageable, filterable and sortable KendoUI Grid administration for displaying the ideas. The grid should support editing of the ideas's title and content (multiline). Implement deleting of ideas. Deleting an idea should delete all of its comments. Creating ideas from the grid is not required.

11 points

Other (Advanced) Requirements (20 points)

- On the registration page place and validate CAPTCHA
 - Use Google reCAPTCHA (https://www.google.com/recaptcha)

Extract hiding email logic (replacing admin@nikolay.it with adm**@nik****.it) into a service and unit test the service logic with all possible cases. Only the first 3 symbols of the user and the domain name should be visible. All other characters should be replaced with "*".

4 points

The "idea details page" URLs should be in the following format: /suggestions/2650757-bring-back-macros where "2650757" is the Id of the idea (suggestion) and "bring-back-macros" is the title.

3 points

o Unit test that all URLs (including the one described above) maps to the correct controller, action and parameters. Test all possible cases.

3 points

Create a global filter (for all requests) that returns the user IP address as a response header called "X-ROSES-ARE-RED-VIOLETS-ARE-BLUE-I-KNOW-EVERYTHING-ABOUT-YOU" which value is the client IP address. Example:

X-ROSES-ARE-RED-VIOLETS-ARE-BLUE-I-KNOW-EVERYTHING-ABOUT-YOU: ::1

3 points

You code should have **0 StyleCop warnings**.

2 points

Evaluation Criteria

The evaluation criteria include: correct and complete fulfillment of the requirements; good technical design and appropriate use of technologies; high-quality code (correctness, readability, maintainability). Ensure your **UI behaves correctly** when the users enter invalid data, e.g. too long text in a text field or HTML special characters like "
br/>". Validate the data in your forms. Don't forget the CSRF.

Exam Duration

Students are allowed to work up to 8 hours.