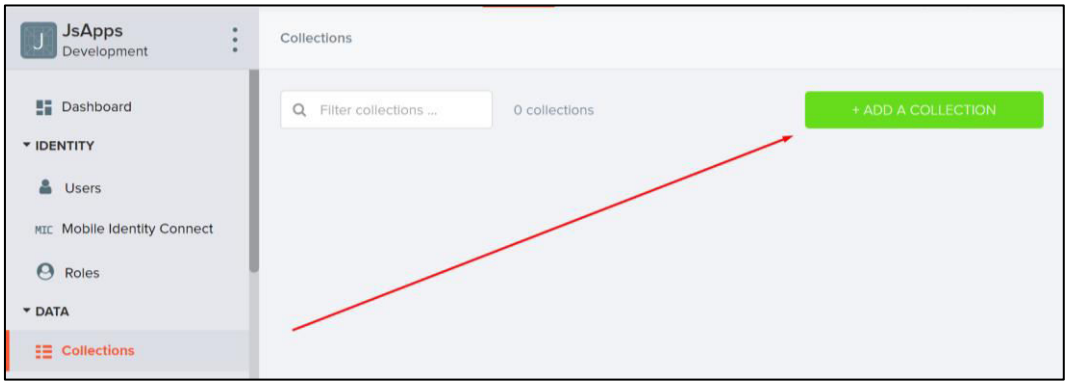
JS Applications Exam - SoftTerest SPA

You are assigned to implement a **Web application** (SPA) using HTML5, JavaScript, AJAX, REST and JSON with cloud-based backend (Kinvey). Using libraries like **jQuery**, **Handlebars** and **Sammy** is allowed but is not obligatory. The app keeps **users** and **ideas**. **Guests** should be able to **register** and **login**. Logged-in users should be able to view **all ideas**, **create ideas**, **like and comment ideas**, see **details** about an **idea** and **logout**. Logged-in users should also be able to **edit** or **delete** the ideas **they have created**. There should also be a **section** where users can **see only the ideas they have created**.

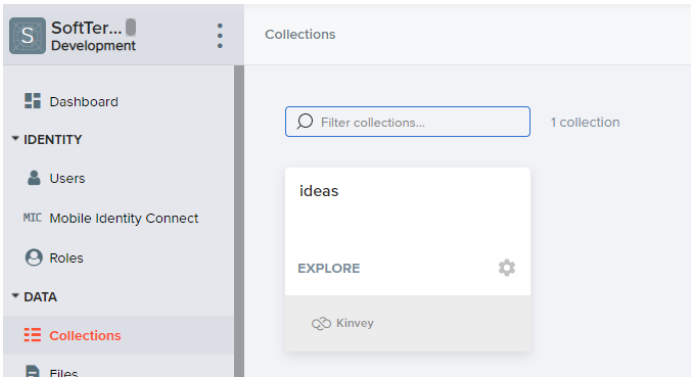
1. Create a Kinvey REST Service

Register at **Kinvey.com** and create application to keep your data in the cloud.

Create a collection called **ideas.** Each **idea** has a **name**, **description**, **organizer, comments** and **likes** (starting from 0).



In order to be able to keep track of the likes and to add comments, you need to give all users permission



to edit this collection. So, go to the **properties** of the collection.

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Then go to the **permissions** and **edit** them to look like this:

2. Test the Kinvey REST Services

Using **Postman** or other HTTP client tool (you can use Kinvey's built-in **API Console**), test the REST service end points:

User Registration (Sign Up)

POST https://baas.kinvey.com/user/***app_id***/	
Request headers	`Authorization: Basic base64(app_id:app_secret)` `Content-Type: application/json`

Request body	`{`
	`  "username": "testuser",`
	`  "password": "testuserpass890"`
	`}`

Response
201 Created
	`{`
	`  "_id": "59930c78a743e20c7d3fca77",`
	`  "username": "testuser",`
	`  "password": "testuserpass890"`
	`}`

Error response **409 Conflict**	`{ "error": "UserAlreadyExists", "description": "This username is already taken. Please retry your request with a different username", "debug": "" }`
Error response **401 Unauthorized**	`{ "error": "InvalidCredentials", "description": "Invalid credentials. Please retry your request with correct credentials", "debug": "" }`

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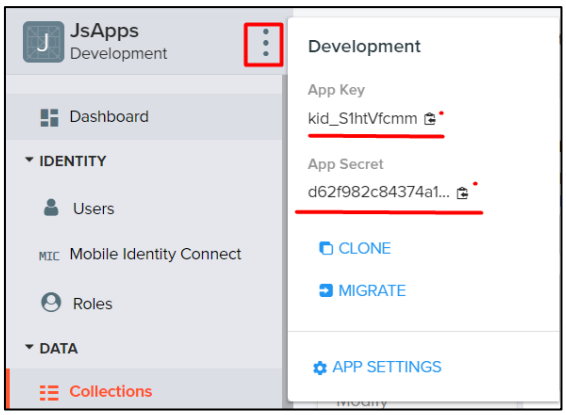
The request needs "**Basic**" **authentication.** Use the Kinvey **App Key** and **App Secret** as credentials.



User Login

POST https://baas.kinvey.com/user/***app_id***/login	
Request headers	`Authorization: Basic base64(app_id:app_secret)` `Content-Type: application/json`

Request body	`{`
	`  "username": "testuser",`
	`  "password": "testuserpass890"`
	`}`

Response
200 OK
	`{`
	`  "_id": "59930c78a743e20c7d3fca77",`
	`  "username": "testuser"`
	`  "_kmd": {`
	`  "authtoken":"8e6471bc-3712-4cfb-b92e-50e62a0c80….Duj5fHdM/7XHIe6KdY="`
	`  …`
	`  },`
	`  …`
	`}`

Error response **401 Unauthorized**	`{ "error": "InvalidCredentials", "description": "Invalid credentials. Please retry your request with correct credentials", "debug": "" }`

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Successful login returns an **authtoken** which is later used to authenticate the CRUD operations.

User Logout

POST https://baas.kinvey.com/user/***app_id***/_logout	
Request headers	`Authorization: Kinvey authtoken`
Response **204 No Content**	
Error response **401 Unauthorized**	`{ "error": "InvalidCredentials", "description": "Invalid credentials. Please retry your request with correct credentials", "debug": "" }`

To logout, you need to provide the **authtoken** given by login/register as "**Kinvey**" authorization header.

List All Ideas

GET https://baas.kinvey.com/appdata/***app_id***/ideas	
Request headers	`Authorization: Kinvey authtoken`

Response
200 OK
	`[{`
	`"title":"Dinner Recipe",`
	`"likes":"0",`
	`"description":"There are few things...",`
	`"imageURL":"https://....",`
	`"comments":"[]",`
	`"creator": "peter.georgiev"`
	`"_acl":`
	`{`
	`"creator":"5bfd4674682ae23931b4f91c"`
	`},`
	`"_kmd":`
	`{`
	`"lmt":"2018-11-28T15:25:24.521Z",`
	`"ect":"2018-11-28T14:55:00.958Z"`
	`}`

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	}, …]
Error response **401 Unauthorized**	{ "error": "InvalidCredentials", "description": "Invalid credentials. Please retry your request with correct credentials", "debug": "" }

Create Idea

POST https://baas.kinvey.com/appdata/***app_id***/ideas	
Request headers	Authorization: Kinvey authtoken Content-Type: application/json

Request body	{
	"title":"Dinner Recipe",
	"likes":"0",
	"description":"There are few things...",
	"imageURL":"https://....",
	"comments":"[]",
	"creator": "peter.georgiev"
	}

Response
201 Created
	{
	"title":"Dinner Recipe",
	"likes":"0",
	"description":"There are few things...",
	"imageURL":"https://....",
	"comments":"[]",
	"creator": "peter.georgiev"
	"_acl": {
	"creator": "5bfd4674682ae23931b4f91c"
	},
	"_kmd": {
	"lmt": "2018-11-28T15:39:58.801Z",
	"ect": "2018-11-28T15:39:58.801Z"

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	}, "_id": "5bfeb6ce682ae23931bf7d26" }
Error response **401 Unauthorized**	{ "error": "InvalidCredentials", "description": "Invalid credentials. Please retry your request with correct credentials", "debug": "" }

Edit Idea

PUT https://baas.kinvey.com/appdata/***app_id***/ideas/**idea_*id***	
Request headers	**Authorization: Kinvey authtoken** **Content-Type: application/json**
Request body	{ "title":"Dinner Recipe", "likes":"0", "description":"There are few things...", "imageURL":"https://....", "comments":"[]", "creator": "peter.georgiev" }
Response **200 Ok**	{ "_id": "59931398996ab5127d2a84d1", "title":"Dinner Recipe", "likes":"0", "description":"There are few things...", "imageURL":"https://....", "comments":"[]", "creator": "peter.georgiev" }
Error response	{ "error": "InvalidCredentials", "description": "Invalid credentials. Please retry your request with correct

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401 Unauthorized	`credentials", "debug": "" }`

Delete Idea

DELETE https://baas.kinvey.com/appdata/***app_id***/ideas/**idea_*id***	
Request headers	`Authorization: Kinvey authtoken`

Response
200 OK
	`{`
	`  "count": 1`
	`}`

Error response **404 Not Found**	`{ "error": "EntityNotFound", "description": "This entity not found in the collection", "debug": "" }`
Error response **401 Unauthorized**	`{ "error": "InvalidCredentials", "description": "Invalid credentials. Please retry your request with correct credentials", "debug": "" }`

Like Idea

PUT https://baas.kinvey.com/appdata/***app_id***/ideas/**idea_*id***	
Request headers	`Authorization: Kinvey authtoken` `Content-Type: application/json`

Request body	`{`
	`  "title":"Dinner Recipe",`
	`  "likes":"0",`
	`  "description":"There are few things...",`
	`  "imageURL":"https://....",`
	`  "comments":"[]",`
	`  "creator": "peter.georgiev"`
	`}`

Response **200 Ok**	`{` `  "title":"Dinner Recipe",`

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	<pre>"likes":"0",
	"description":"There are few things...",
	"imageURL":"https://....",
	"comments":"[]",
	"creator": "peter.georgiev",
	"_id": "5bfeb6ce682ae23931bf7d26",
	"_acl": {
	"creator": "5bfd4674682ae23931b4f91c"
	},
	"_kmd": {
	"lmt": "2018-11-28T15:45:13.760Z",
	"ect": "2018-11-28T15:39:58.801Z"
	}
	}</pre>

Error response **401 Unauthorized**	<pre>{ "error": "InvalidCredentials", "description": "Invalid credentials. Please retry your request with correct credentials", "debug": "" }</pre>

My Ideas

GET https://baas.kinvey.com/appdata/***app_id***/ideas?query={"_acl.creator":"${***user_id***}"}	
Request headers	**Authorization: Kinvey authtoken**

Response
200 OK
	<pre>[{
	"title":"Dinner Recipe",
	"likes":"0",
	"description":"There are few things...",
	"imageURL":"https://....",
	"comments":"[]",
	"creator": "peter.georgiev"
	"_acl":
	{
	"creator":"5bfd4674682ae23931b4f91c"</pre>

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	<pre>},
	"_kmd":
	{
	"lmt":"2018-11-28T15:25:24.521Z",
	"ect":"2018-11-28T14:55:00.958Z"
	}
	}, …]</pre>

Error response **401 Unauthorized**	<pre>{ "error": "InvalidCredentials", "description": "Invalid credentials. Please retry your request with correct credentials", "debug": "" }</pre>

3. SoftTerest - HTML and CSS

You have been given the web design of the application as **HTML** + **CSS** files.

- Initially all views and forms are shown by the HTML. Your application may **hide/show elements** by CSS (**`display: none`**) or **delete/reattach** from and to the DOM all unneeded elements, or just display the views it needs to display.
- You may render the views/forms/components with **jQuery** or **Handlebars**.

Important: Don't change the elements' **class names** and **ids**. Don't rename form fields/link names/ids. You are **allowed** to add **data attributes** to any elements. You may modify **`href` attributes** of links and add **`action/method` attributes** to **forms**, to allow the use of a routing library.

4. SoftTerest - Client-Side Web Application

Design and **implement** a client-side front-end app (SPA) for managing **ideas**. Implement the functionality described below.

(BONUS) Notifications (5 pts)

The application should notify the users about the result of their actions.

- In case of a **successful** action, a **notification message (green)** should be shown, which disappears automatically after 5 seconds or manually when the user clicks it.

  {Success Message...}

- In case of **error**, an **error notification message (red)** should be shown, which disappears on user click.

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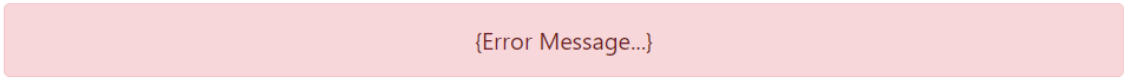
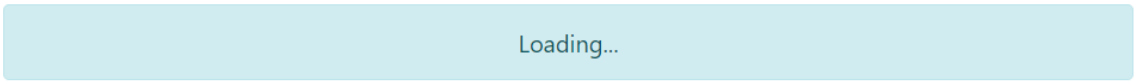


- During the **AJAX calls** a **loading notification message (blue)** should be shown. It should disappear automatically as soon as the AJAX call is completed.

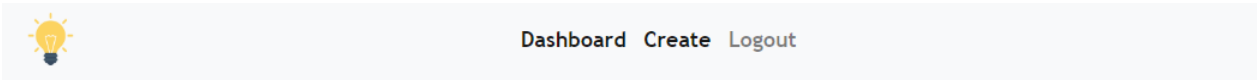


- **NOTE**: You get all the points if **all** the notifications have the **exact content** as described in each section above.

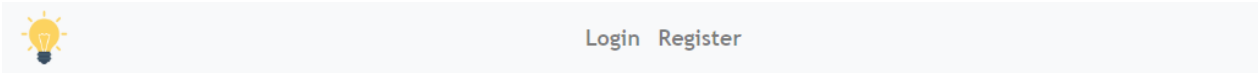
Navigation Bar (5 pts)

Navigation links should correctly change the current page (view).

- Clicking on the links in the **NavBar** should display the view behind the link (views are represented as sections in the HTML code).
- Your application may **hide/show elements** by CSS (**`display: none`**) or **delete/reattach** from and to the DOM all unneeded elements, or just display the views it needs to display.
- The Logged-in user navbar should contain the following elements: **`Icon`** (**`icon.jpg`**) which is a **link** to the **Home page**, [**`Create`**], [**`Logout`**].
  - The Icon should be a link that navigates to the **currently logged in user's profile**.



- The guest users navbar should contain the following elements: : **`Icon`** (**`icon.jpg`**) which is a **link** to the **Home page,** [**`Register`**] and [**`Login`**].



Home Page (Guest) (5 pts)

The initial page (view) should display the **guest navigation bar** ("**`Home`**" (icon), "**`Register`**"and "**`Login`**") + **Guest Home Page** + **`Footer`**.

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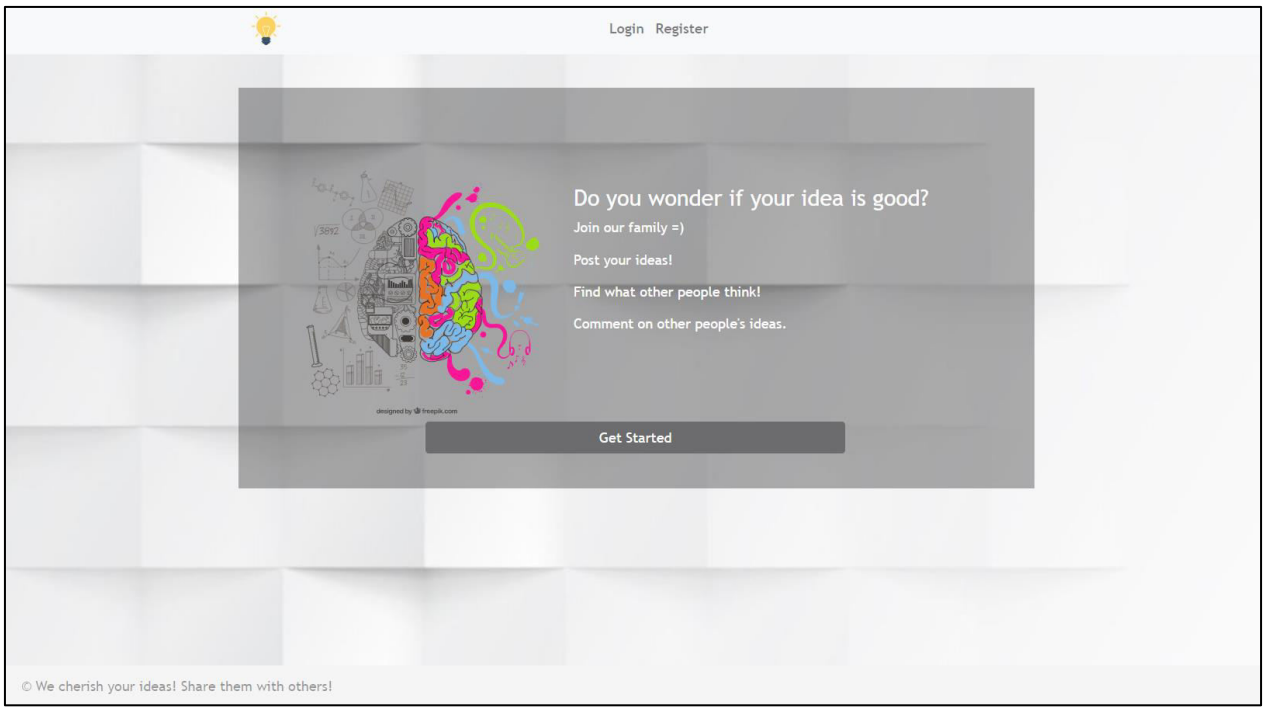

Register User (5 pts)

By given **username** and **password,** the app should register a new user in the system.

- (BONUS) The following validations should be made:
  - The **username** should be **at least 3 characters** long
  - The **password** should be **at least 3 characters** long
  - The **repeat password** should be **equal to the password**
- After a **successful registration**, a notification message **`"User registration successful."`** should be displayed and the app should **redirect** to the **home page with the right navbar**.
- In case of **error** (eg. invalid username/password), an appropriate error **message** should be displayed, and the user should be able to **try** to register again.
- Keep the user session data in the browser's **local storage**.

Register once and create/Like awesome ideas!

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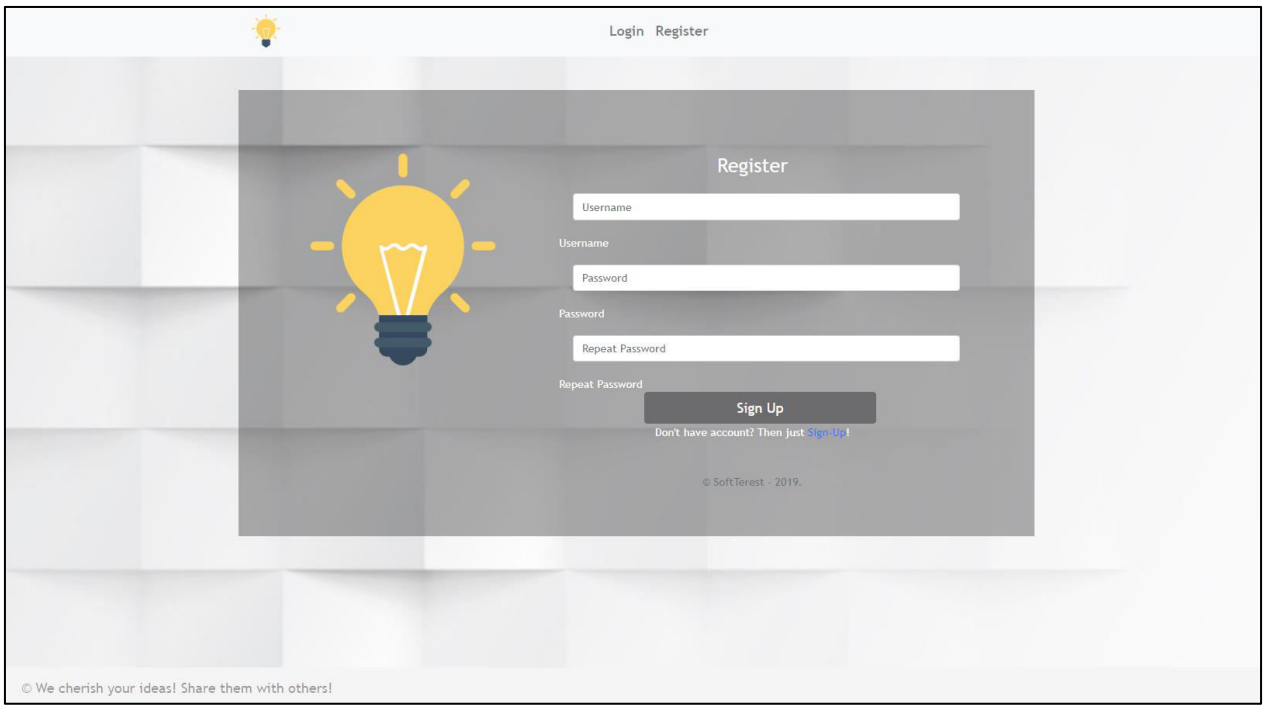

Login User (5 pts)

By given **username** and **password,** the app should login an existing user.

- After a **successful login**, a notification message **`"Login successful."`** should be shown and the user home screen should be displayed.
- In case of **error**, an appropriate error message should be displayed and the user should be able to fill in the login form again.
- Keep the user session data in the browser's **local storage**.
- Clear **all** input fields after a **successful** login.

You are one step away from awesome ideas!

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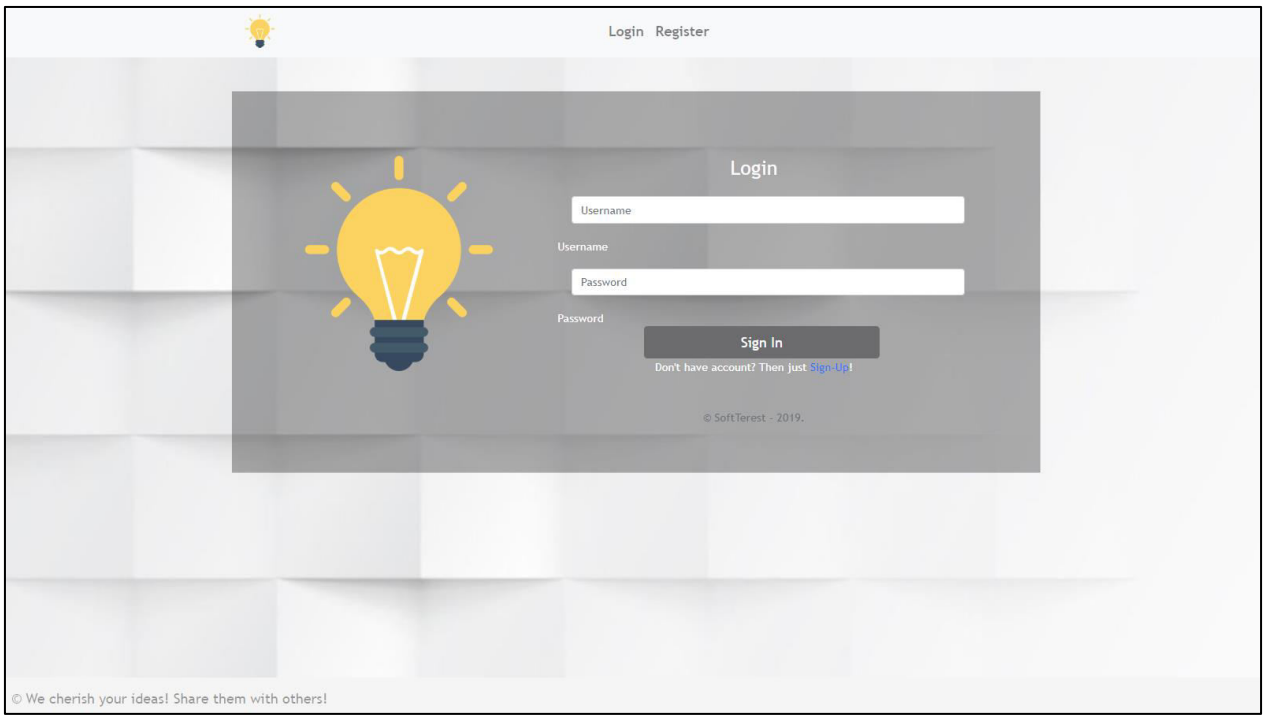
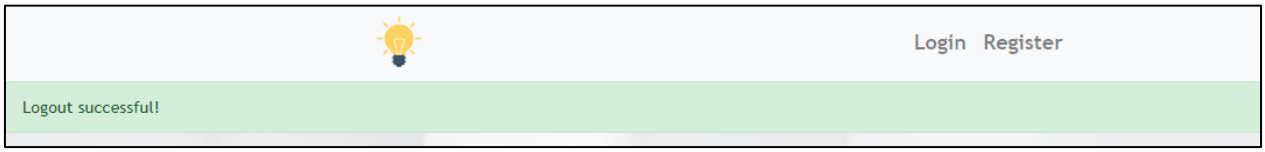
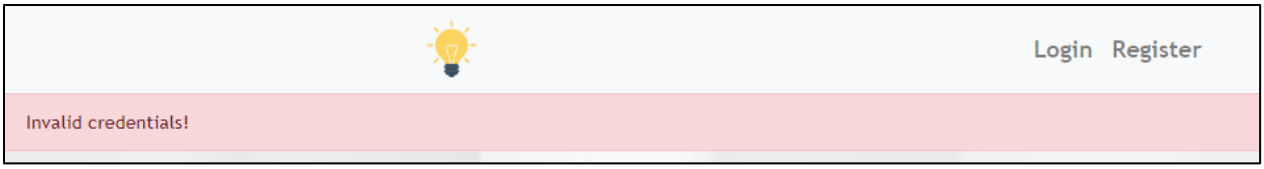


Logout (5 pts)

Successfully logged in users should be able to **logout** from the app.

- After a **successful** logout, a **notification** message **"`Logout successful.`"** should be displayed and the **anonymous screen** should be shown
- The **"logout" REST service** at the back-end **must** be called at logout
- All local information in the browser (**user session data**) about the current user should be deleted





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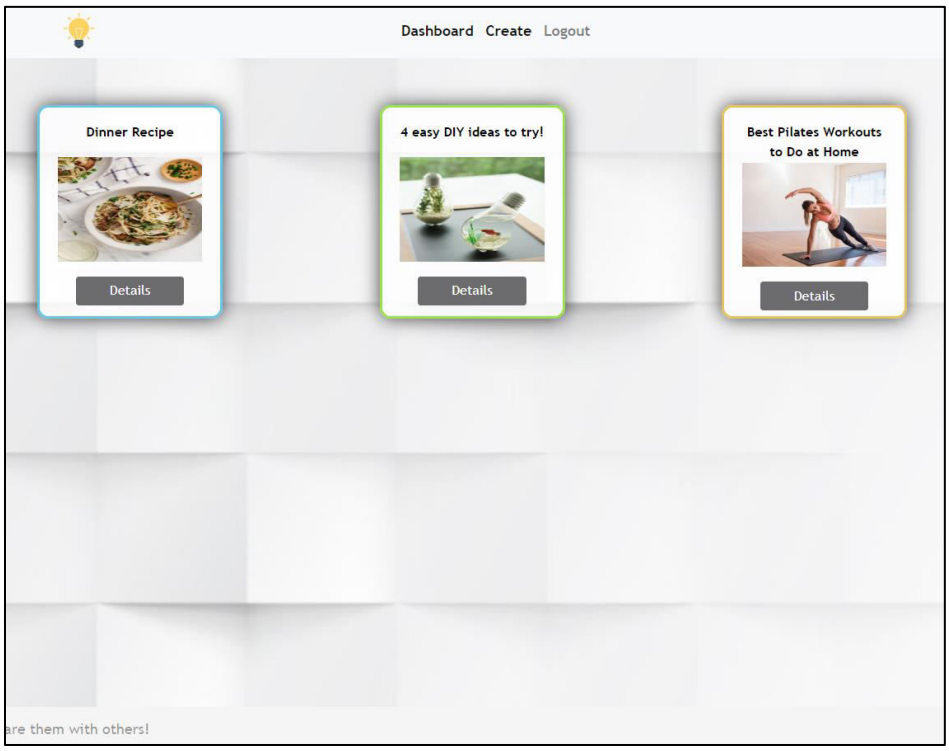
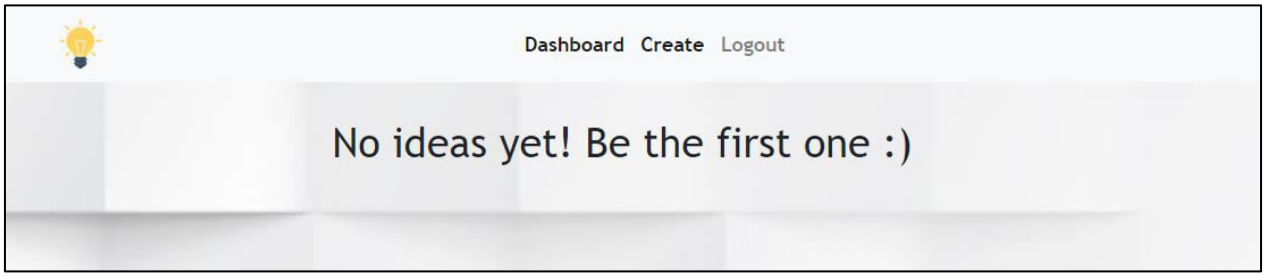
Dashboard (30 pts)

Successfully logged-in users should be able to see the **`Dashboard`**. They should be able to see all created ideas.



If there are **NO** such ideas, the following view should be displayed:



Create (10 pts)

Logged-in users should be able to **Create** ideas.

Clicking the [**`Create`**] **link** in the **NavBar** should **display** the **`Create page`**.

- (Bonus) The form should contain the following validations:
  - The **title** should be **at least 6 characters** long.
  - The **description** should be **at least 10 characters** long.
  - The **image** should start with **`"http://"`** or **`"https://"`**.
  - **By default**, every newly created idea must have additional information:

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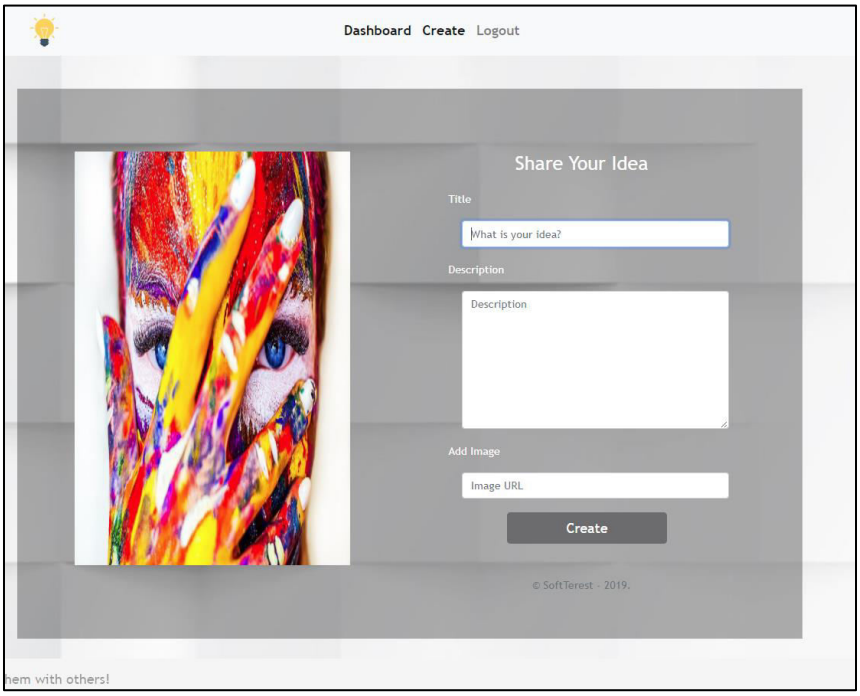
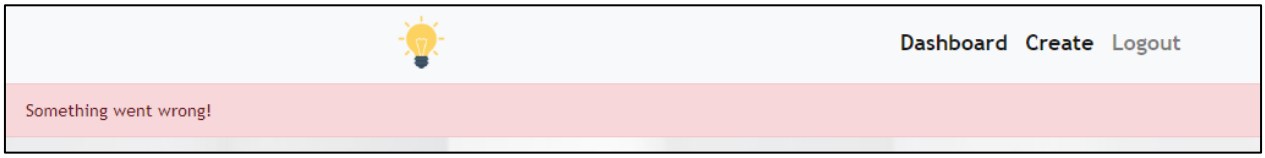
        - **Creator:** string representing the current idea creator;
        - **Likes:** number starting from 0;
        - **Comments:** empty array
    - After a **successful** idea creation, a notification message **"Idea created successfully."** should be displayed and the **Dashboard** should be shown.
- The inputs fields in the form **should be cleared.**
- The newly organizer idea should be stored in the Kinvey collection "**ideas**".





Details Idea (10 pts)

Logged-in users should be able to **view details** about ideas.

Clicking the [**Details**] **link** in of a **particular idea** should **display** the **Idea Details page**.

- If the currently logged-in user is the organizer of the idea, [**Delete**] **button** should be set to **visible**, otherwise there should be 2 buttons [**Like**] and [**Comment**].
- If there are no comments you should display **"No comments yet"**

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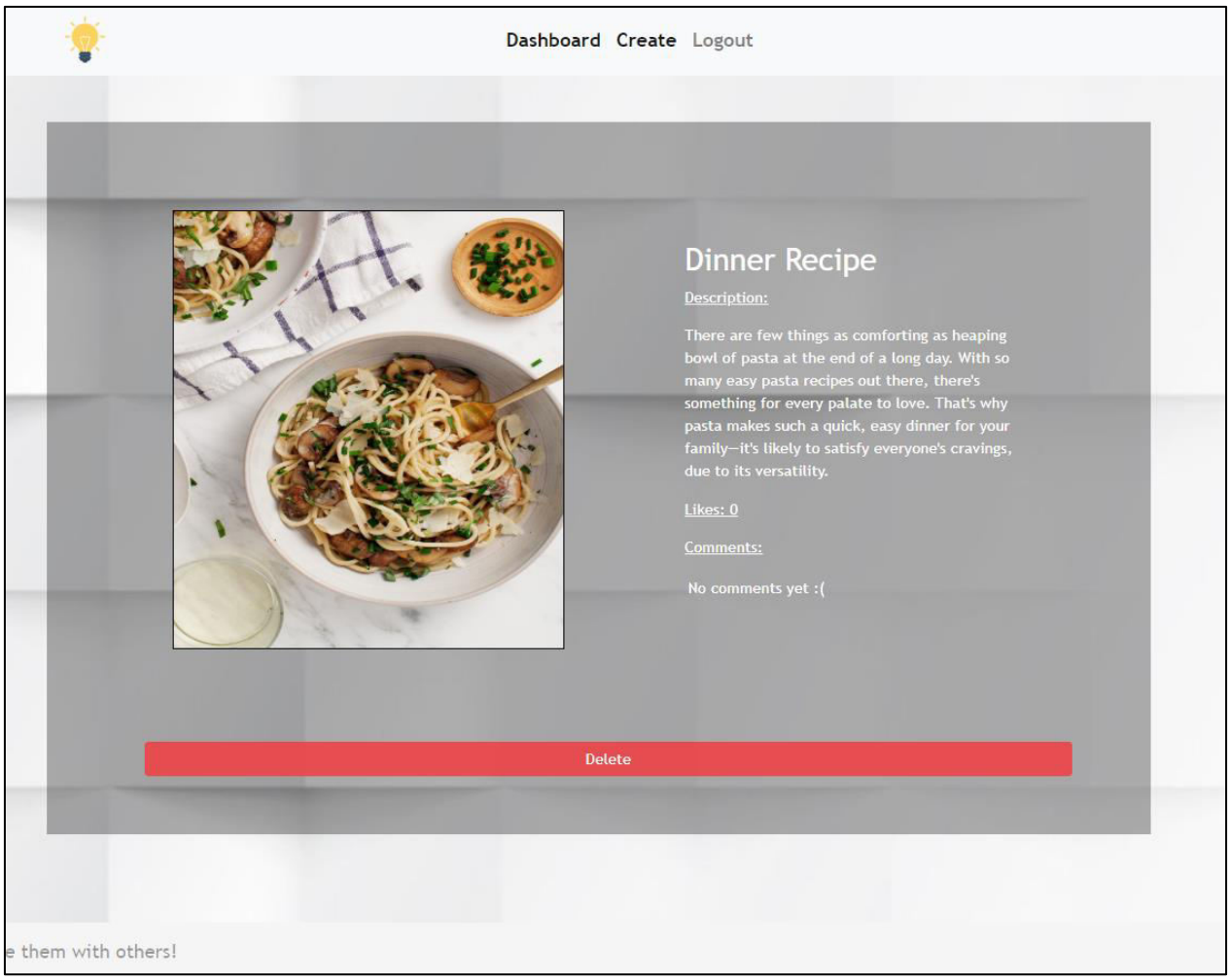

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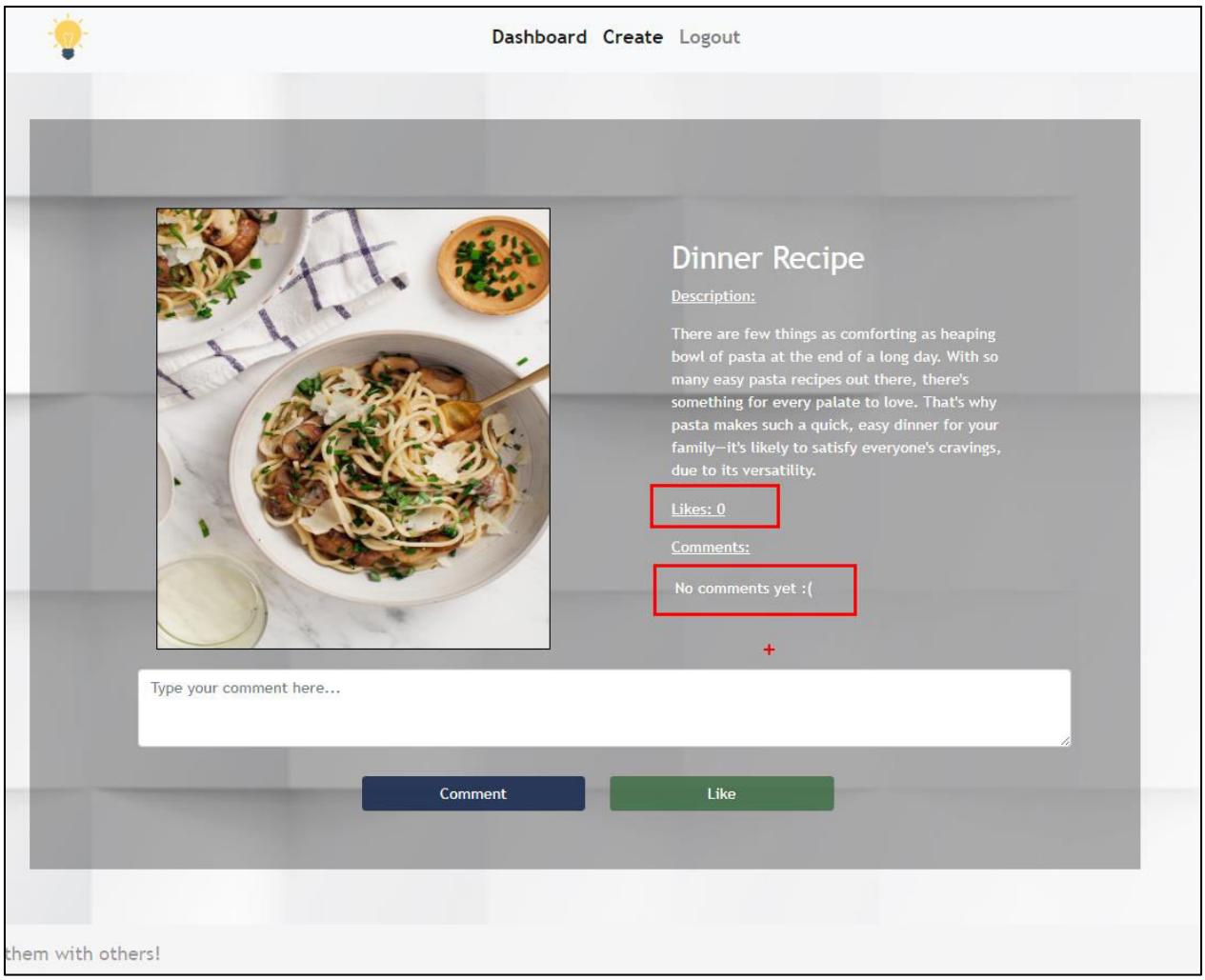

Comment on Idea (10 pts)

Logged-in users should be able to **comment** ideas.

Clicking the [`Comment`] **link** of a **particular idea** on the **`Idea Details` page** should **get the comment from the textarea and display it in the proper section.**

NOTE: A user should **NOT** be able to comment an **idea**, created by **himself**.

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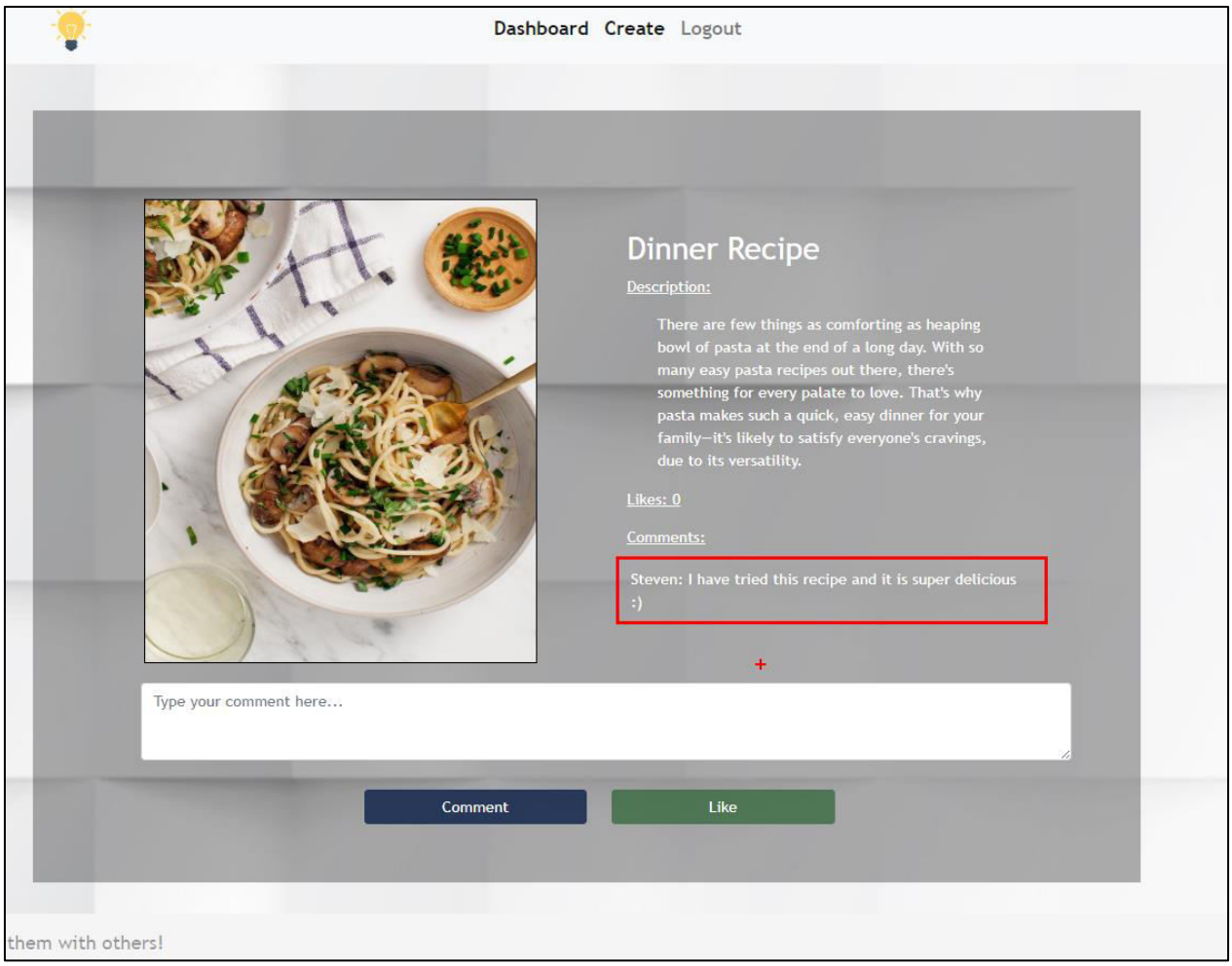

- Every comment shoud be displayed as follows: **`{current user} : {comment}`**

Like Idea (10 pts)

Logged-in users should be able to **Like** ideas, created by **other users**.

NOTE: A user should **NOT** be able to Like an **idea**, created by **himself**.

Clicking the [**`Like`**] **link** of an **idea** (on the **`Idea Details page`**) should **increase** the property for the **likes** of the corresponding idea.
Users can **Like ideas** multiple times**.**

Delete Idea (5 pts)

Logged-in users should be able to **delete their** ideas.

Clicking the [**`Delete`**] **link** of an **idea** (on the **`Idea Details page`**) should **delete** the **idea**.

- After **successful idea delete** a notification message **`"Idea deleted successfully."`** should be displayed and the **`Dashboard`** should be **shown**

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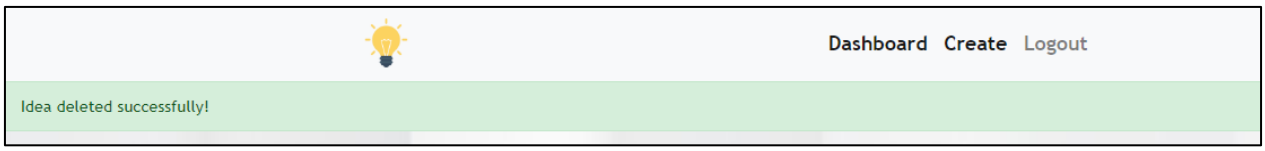
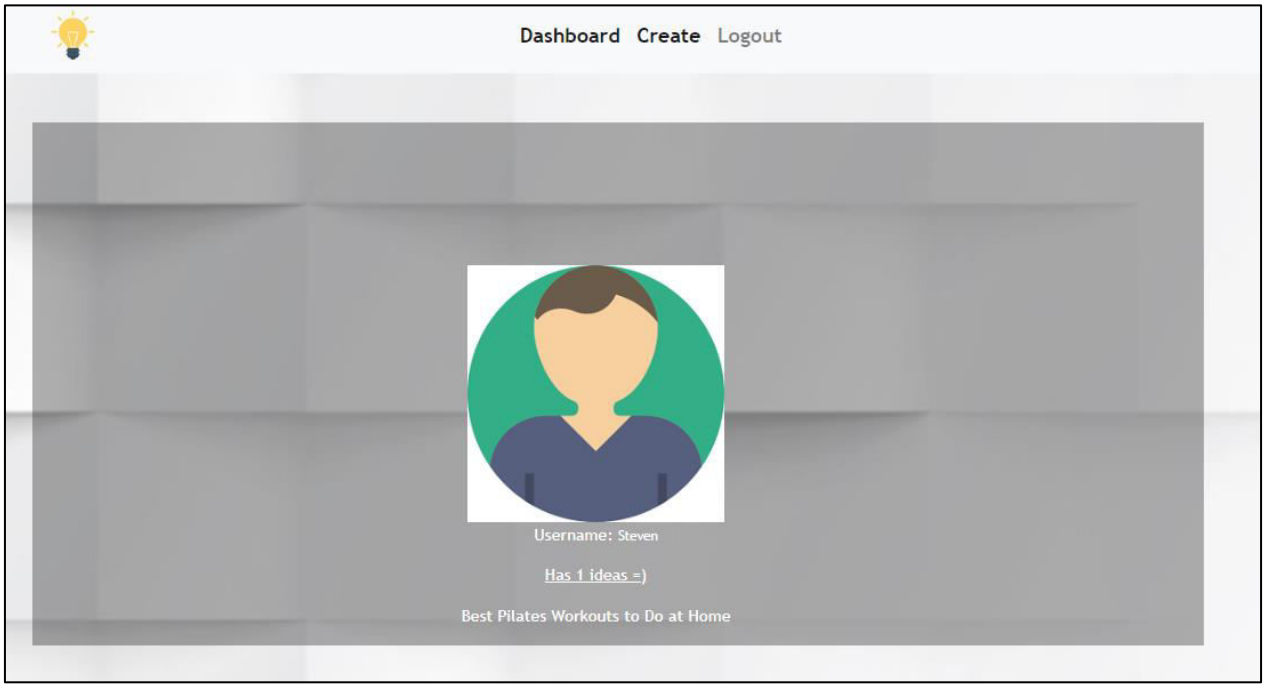


(BONUS) Profile Page (5 pts)

Logged-in users should be able to **view their profile**.

Clicking the **Icon link** on the **navigation bar** should **display** the **`User Profile` page**:

- Each user profile should display user info - **profile picture**, **username** and **ideas information**
  - **"`Has {count} ideas`"**
  - The **names** of **all ideas** which the user has **created**.



- In case of **no ideas**, display "**`No ideas yet`**".

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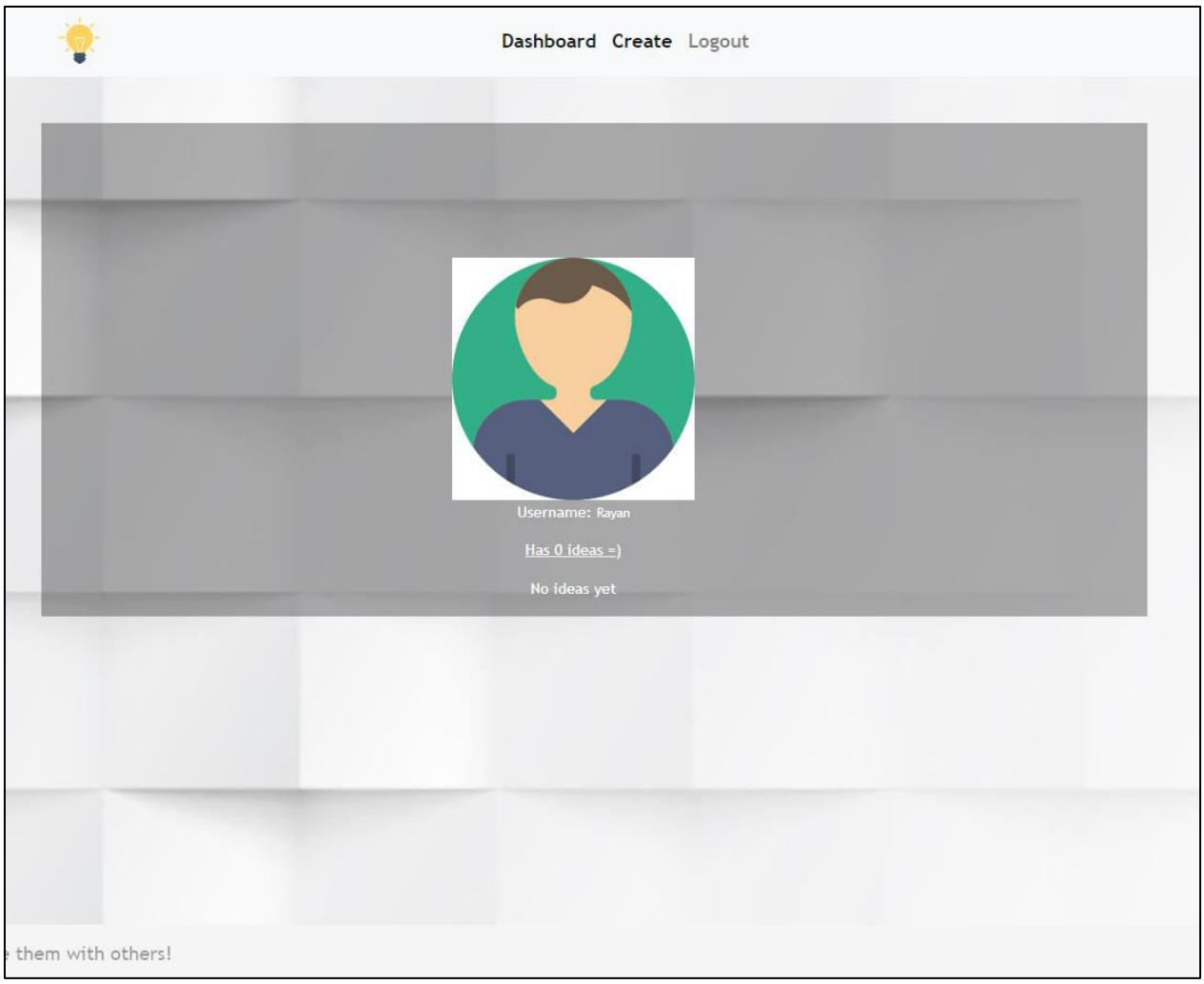

(BONUS) Sorting: (5 pts)

The ideas in the **home page** (for **registered** users), should be sorted in **descending** order by **likes.**

5. Submitting Your Solution

Exclude the **`node_modules`** folder and ZIP your project. Upload the archive to Judge system.

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