

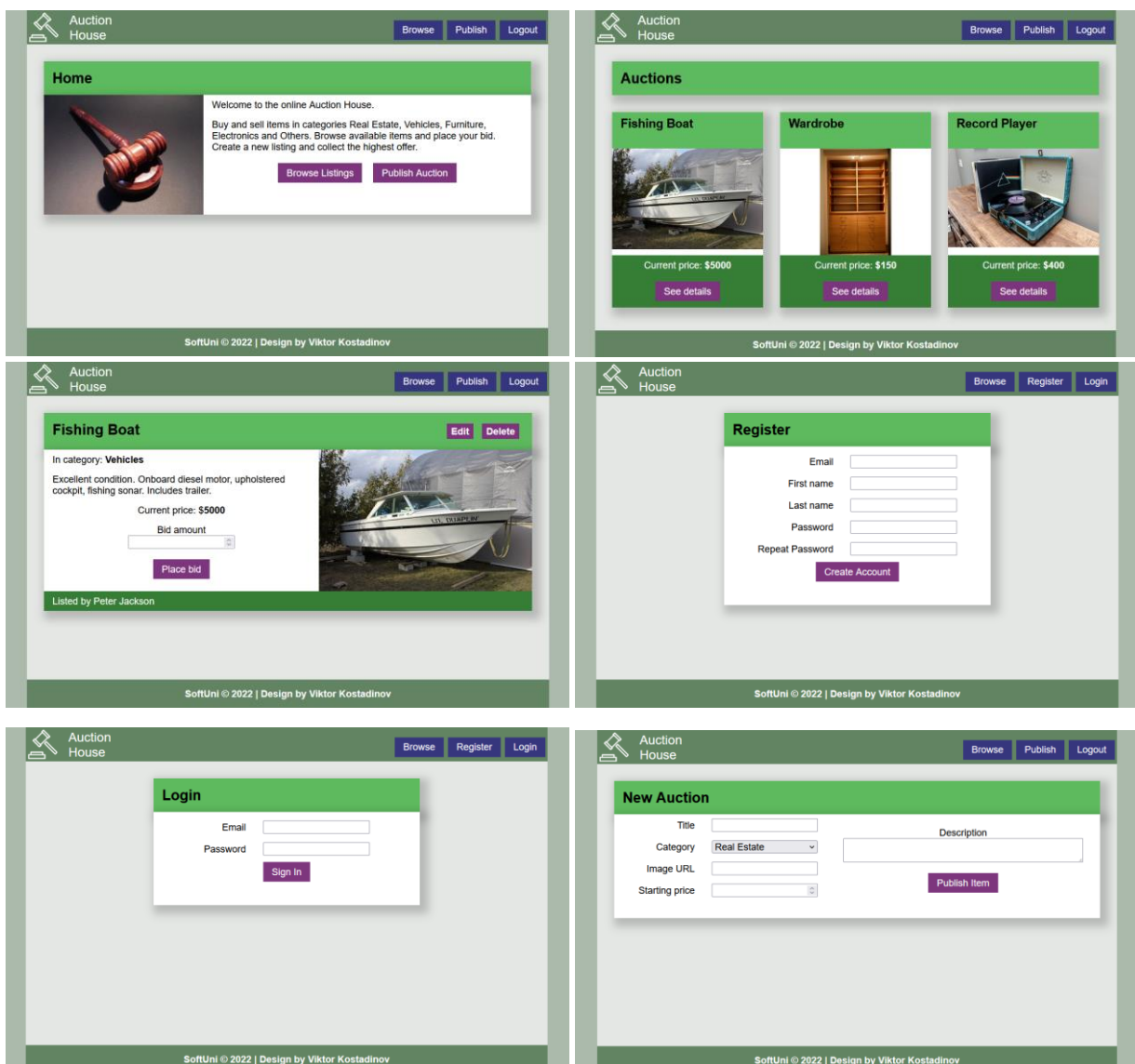
JS Back-End Exam – Auction House

1. Exam Rules

1. You have **4 hours**. When you are ready, make sure all **dependencies** are listed in the **package.json** file and submit your project **as described at the end of this file**. **Only the last submission will be evaluated!**
2. You are provided with **HTML & CSS** files. You may **add attributes** (such as **class** and **dataset**), but shouldn't **change existing** ones, except for **href** on links and the **method** and **action** attributes of HTML forms.
3. Use **express**, **MongoDB** as a database with **mongoose** and **bcrypt** for hashing of passwords.
4. You can use any **view engine** of your choice (**handlebars**, **EJS**, **Pug**, etc.). **Client-side code is not allowed**.
5. The application **must start** from a file named **"index.js"** on port **3000**.

2. Application Overview

Get acquainted with the provided HTML and CSS and create an application for **online auctions**. Visitors can view the **Home page** and **Browse page**, they can also **register** with an **email**, **password**, and **name**, which will allow them to publish their **auctions**, as well as **bid** for existing auctions (but only if the **current user is not the author**). Authors can **edit** or **delete** their own publications.



3. Database Models

The **Database** of the **Auction House** application needs to support **2 entities**.

Note: You may add additional properties to the models if this will help you solve the task.

User

- **Email** – string (required)
- **Password** – string (required)
- **First name** – string (required)
- **Last name** – string (required)

You should make the following validations:

- The **email** should be in the following format: **<name>@<domain>.<extension>**
 - Only English letters are allowed for any of the parts of the email
 - There must be a **@** after the **<name>**
 - There must be a **dot** after the **<domain>**
 - Example of a valid email - "**petar@softuni.bg**"
- The **password** should be **at least 5 characters** long
- The **first** and **last names** should be **at least 1 character** long

Auction

- **Title** – string (required)
- **Description** – string
- **Category** – string (required)
- **Image URL** – string
- **Price** – number (required)
- **Author** –reference to the **User** model (required)
- **Bidder** – reference to the **User** model

When a user **bids on an auction**, their **ID** is stored in the **Bidder** field of the auction.

You should make the following validations:

- The **title** should be a minimum of **4 characters** long
- The **description** should be a maximum of **200 characters** long
- The **category** should be one of the following: Vehicles, Real Estate, Electronics, Furniture, Other
- The **price** cannot be negative

4. Functional Requirements (80 pts)

Note: Don't forget to change the paths to the CSS files, and the images.

Navigation

The navigation bar at the top of the page should be dynamic and display different links, depending on the role of the current user.

Guest navigation example:

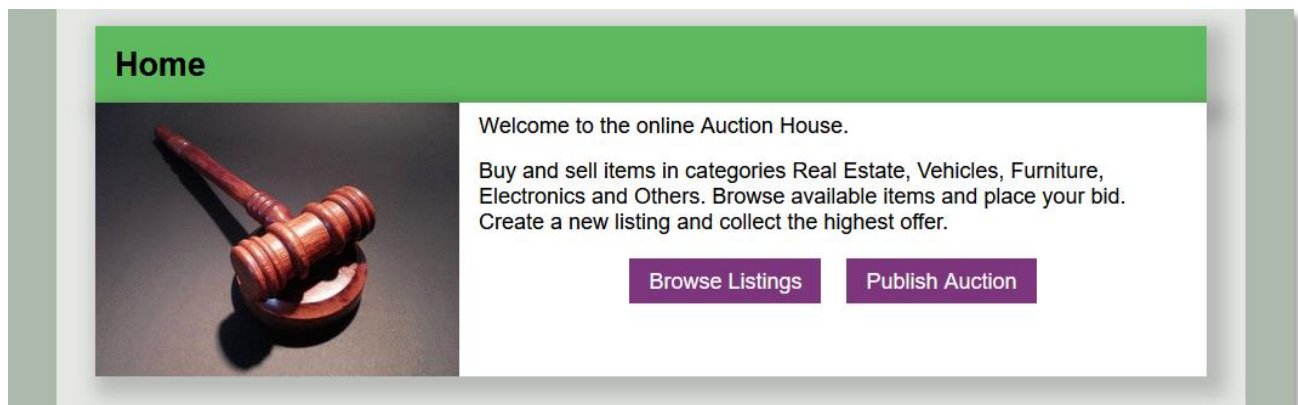


User navigation example:



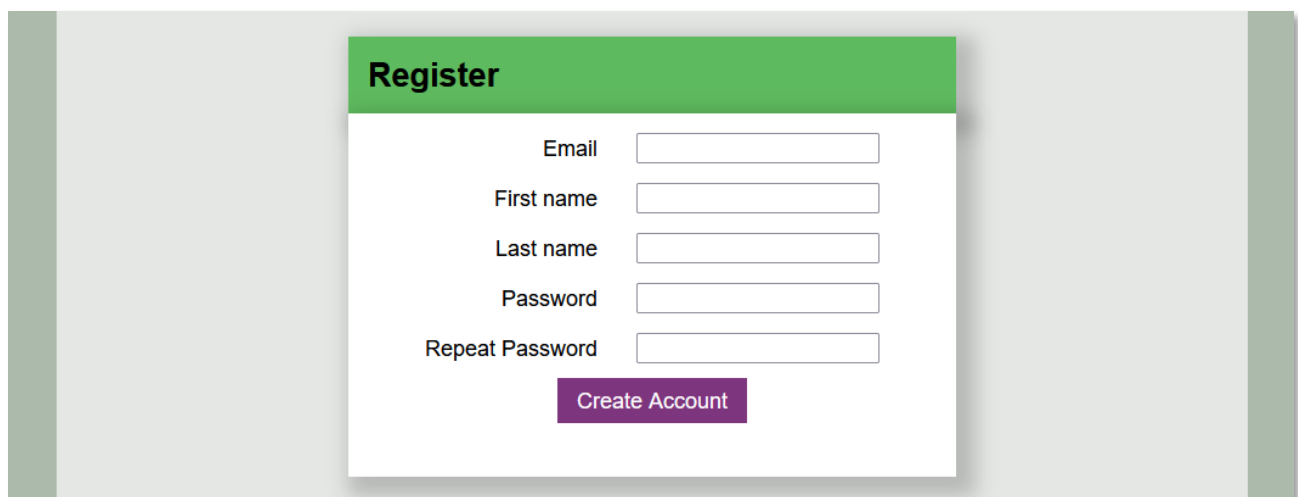
Home Page

Show a welcome screen with links to **Browse Listings**. If the current user is **logged in**, show a link to **Publish Auction**.



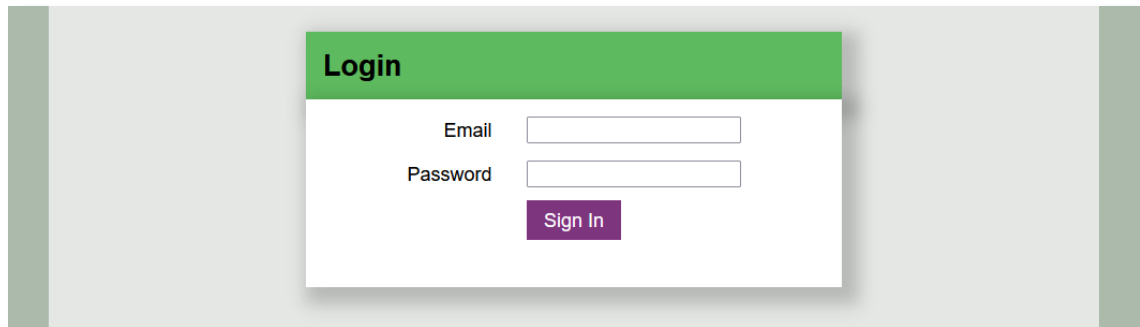
Register Page

Register a user inside the database with **email**, **password**, **first** and **last names**. **Password** inside the database must be **hashed** and both **passwords** must **match**! After successful registration, **redirect to the Home page as an already logged-in user**.



Login Page

Logging an already registered user with the correct **email** and **password**. After successful login, **redirect to the Home page** as an already logged-in user.



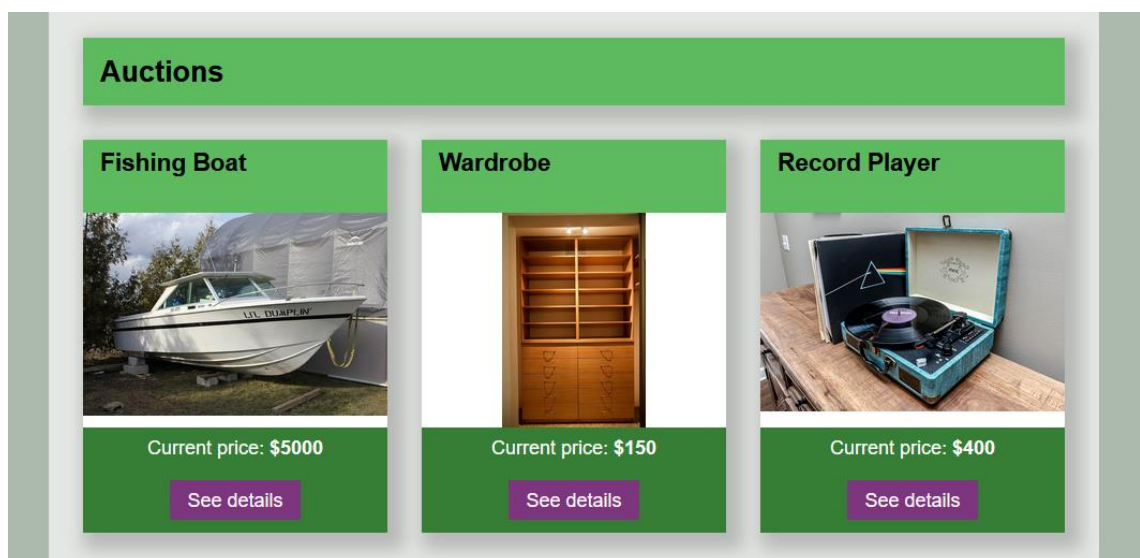
The screenshot shows a login form with a green header labeled "Login". Below the header, there are two input fields: "Email" and "Password". A purple "Sign In" button is positioned below the password field. The form is centered on a light gray background.

Logout

The logout action is available to **logged-in** users. Upon success, clear any session information and **redirect** the user to the **Home page**.

Browse Auctions

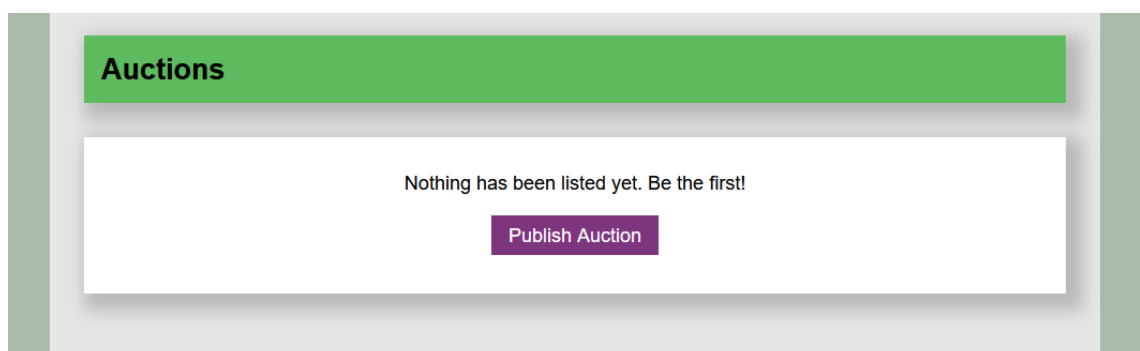
List of all **auctions**. Each **auction** is shown with its title and current price, as well as the **Details** button that leads to the details page for the specific auction.



The screenshot displays a list of auctions under a green header labeled "Auctions". There are three auction cards, each with a title, an image, a current price, and a "See details" button.

Auction Title	Current Price
Fishing Boat	\$5000
Wardrobe	\$150
Record Player	\$400

If there are no auctions in the **database**, display the following view:



The screenshot shows an empty auctions view with a green header labeled "Auctions". Below the header, there is a white box containing the text "Nothing has been listed yet. Be the first!" and a purple "Publish Auction" button.

Details Page

Information about the auction:

- Title
- Category
- Description
- Current price
- Publisher full name
- Actions (Depending on the status of the current user)

Guest

If the user has **not logged in**, **no buttons** should be displayed


Fishing Boat

In category: **Vehicles**

Excellent condition. Onboard diesel motor, upholstered cockpit, fishing sonar. Includes trailer.

Current price: **\$5000**

Listed by Peter Jackson



Author

If the **currently logged-in** user is the **author** of the auction, the **[Edit]** and **[Delete]** buttons should be displayed.

Fishing Boat


In category: **Vehicles**

[Edit](#) [Delete](#)



Also, **only the author** should see the **name** of the current **bidder**:

Current price: **\$5500**
Bid by **John MacLane**



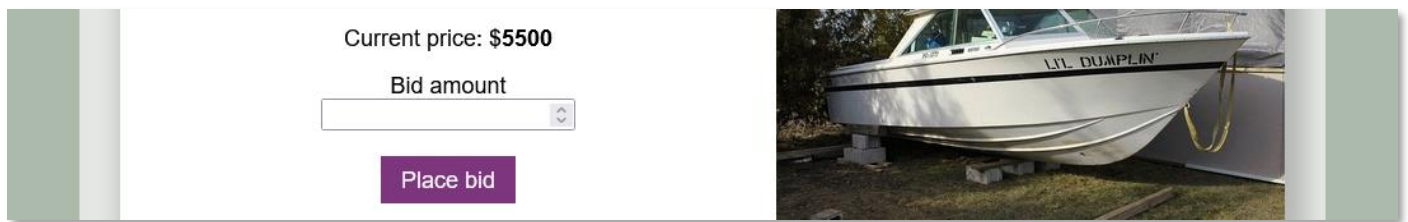
If there are no bids yet, show the text **No bids**:

Current price: **\$5500**
No bids



User

Registered users can **place a bid** on any auction that isn't their own.



Current price: \$5500

Bid amount

Place bid

If the current user is the **highest bidder** for the auction, show this information instead of the Place bid form:



Current price: \$5500

You are currently the **highest bidder** for this auction

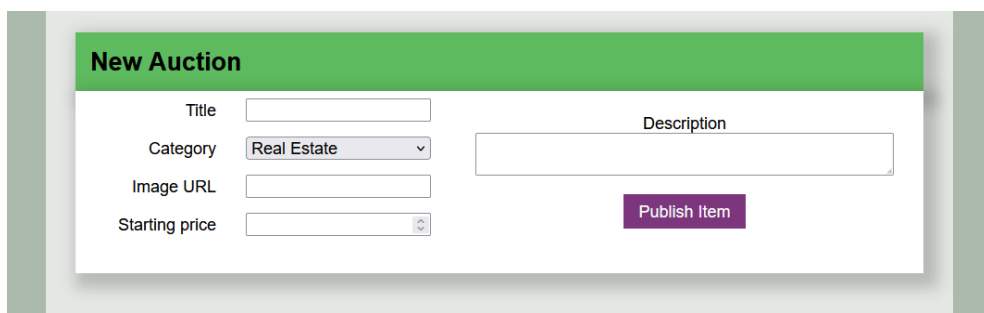
Place Bid

Any **registered user** who **isn't the author** of an auction and **isn't the current bidder**, can place a bid. After a successful bid, the **ID** of the user must be stored in the **bidder** field of the auction and the amount that they bid becomes the new value for **price**. **Redirect** the user to the **Details** page for the auction.

If a user is already the current bidder, or if the **amount** they submitted is **less than or equal** to the current price, an **error message** should be displayed.

Publish Auction

The Publish page is available to **logged-in users**. It contains a form for adding a new **auction**. Upon success, **redirect** the user to the **Browse** page.



New Auction

Title

Category: Real Estate

Image URL

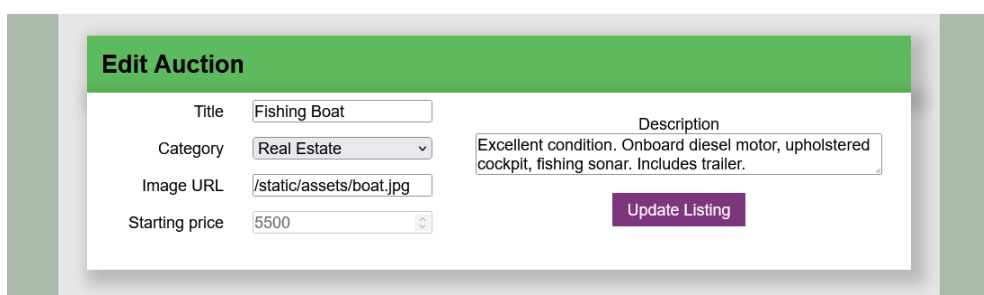
Starting price

Description

Publish Item

Edit Auction

The **Edit** page is available to logged-in users and it allows authors to **edit** their publications. Clicking the **[Edit]** button of a particular auction on the **Details** page should display the **Edit** page, with **all fields** filled with the data for the auction. It contains a form with input fields for all relevant properties.



Edit Auction

Title: Fishing Boat

Category: Real Estate

Image URL: /static/assets/boat.jpg

Starting price: 5500

Description: Excellent condition. Onboard diesel motor, upholstered cockpit, fishing sonar. Includes trailer.

Update Listing

Auctions **without** a bidder may have their price adjusted. If the current auction **has a bidder**, the **price cannot be changed** – the form field should be disabled.

Upon success, **redirect** the user to the **Details page** for the current auction.

Delete Auction

Authors should be able to click over the **[Delete] button** – deleting the current ad from the **database** and the user should be **redirected** to the **Browse page**.

5. Security Requirements (10 pts)

Limit the following functionality to be accessible only to certain user roles:

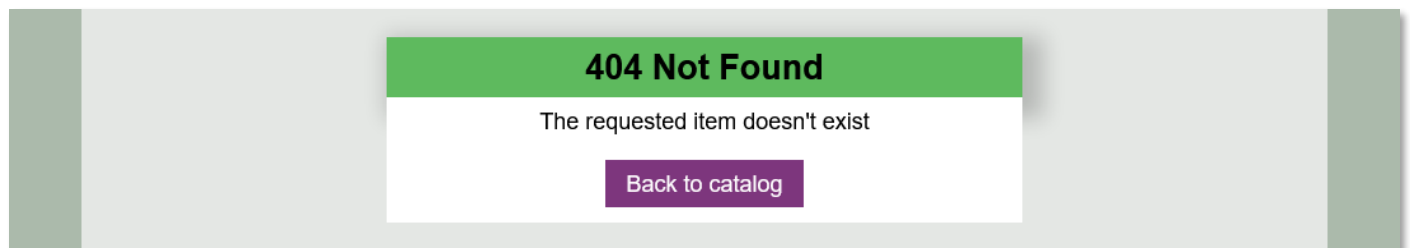
- Only **Guests** can access the **Login page** and functionality
- Only **Guests** can access the **Register page** and functionality
- Only **Users** can access the **Publish Auction page** and functionality
- Only **Users** can access the **Place bid** functionality and only if they aren't the author of the auction
- Only **Users** can access the **Logout** functionality
- Only **Authors** can access the **Delete** and **Edit** functionalities for their own auction

If **Guests** try to **access** a page they should **not be able to**, you must **redirect** them to the **Login page**.

If **Users** try to **access** a page they should **not be able to**, you must **redirect** them to the **Home Page**.

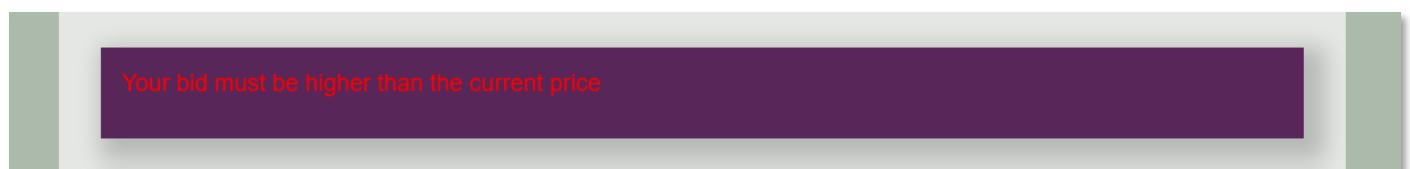
6. Validation and Error Handling (10 pts)

Use the following view for **invalid paths**:



The application should **provide feedback** to the user about the result of their actions. **You can choose to display the first error or all of them. You are free to choose the content of the error message.**

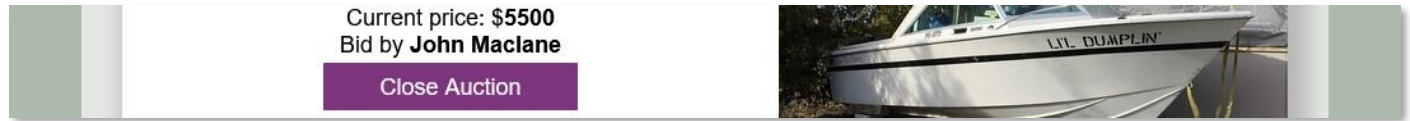
In case of errors, like form validation or placing an invalid bid, you **should display a div** with class **"error-box"**



7. Bonus – Closed Auctions (15 pts)

Authors can **close their auctions** and view a **list of auctions** they have closed.

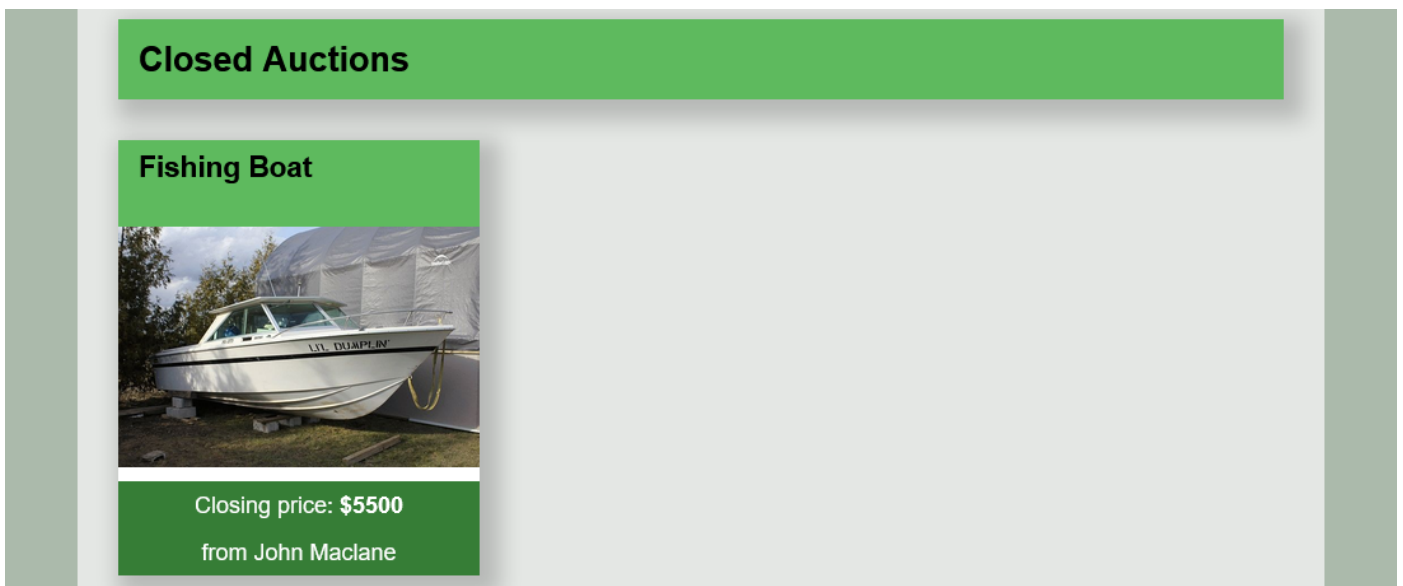
On the **Details page** of auctions created by the current user, if there is a bidder, a **Close Auction** button should appear near the price information. Clicking this link should **redirect** the user to the **Closed Auctions page** and causes the auction to **no longer be displayed** when browsing the **catalog**. Instead, it will now be visible in the **Closed Auctions page** for the current user.



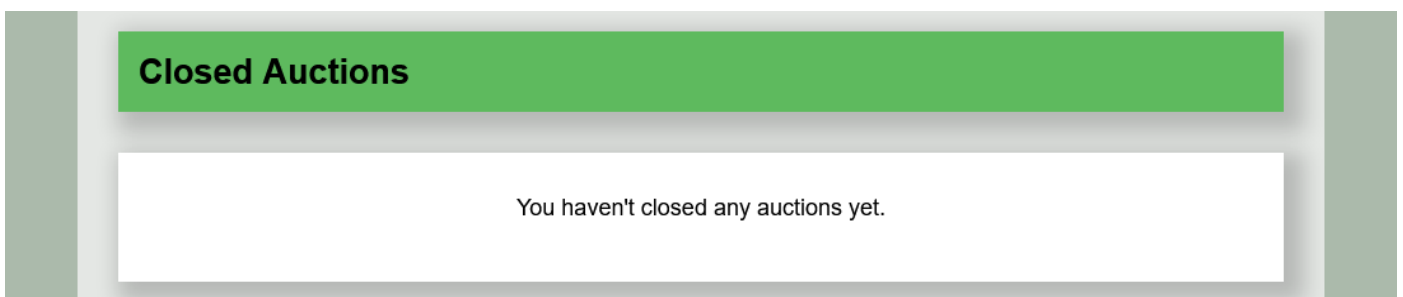
In the **navigation bar** of Users, an additional link is displayed, that leads to a list of their **Closed Auctions**:



The list of closed auctions shows the **title** of each auction as well as the **final price** and the **name of the bidder**. Closed auctions **do not have a details page**.

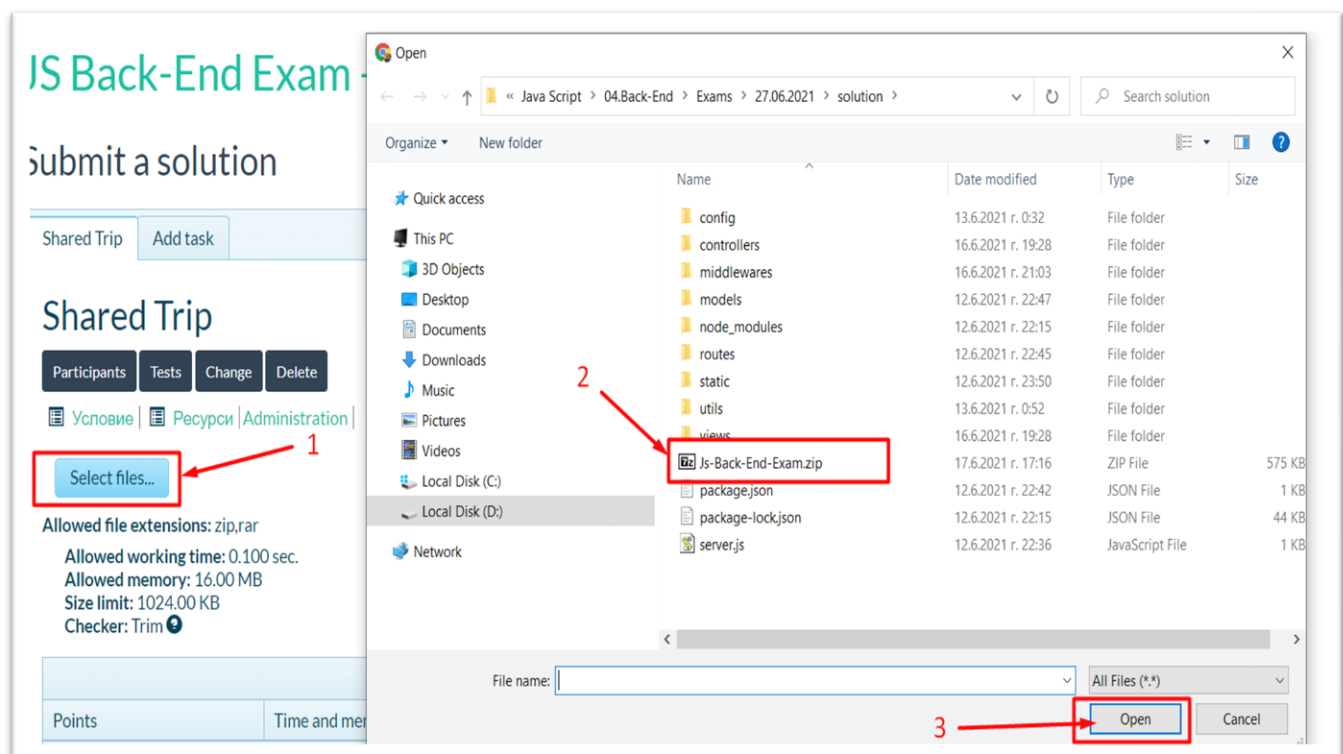
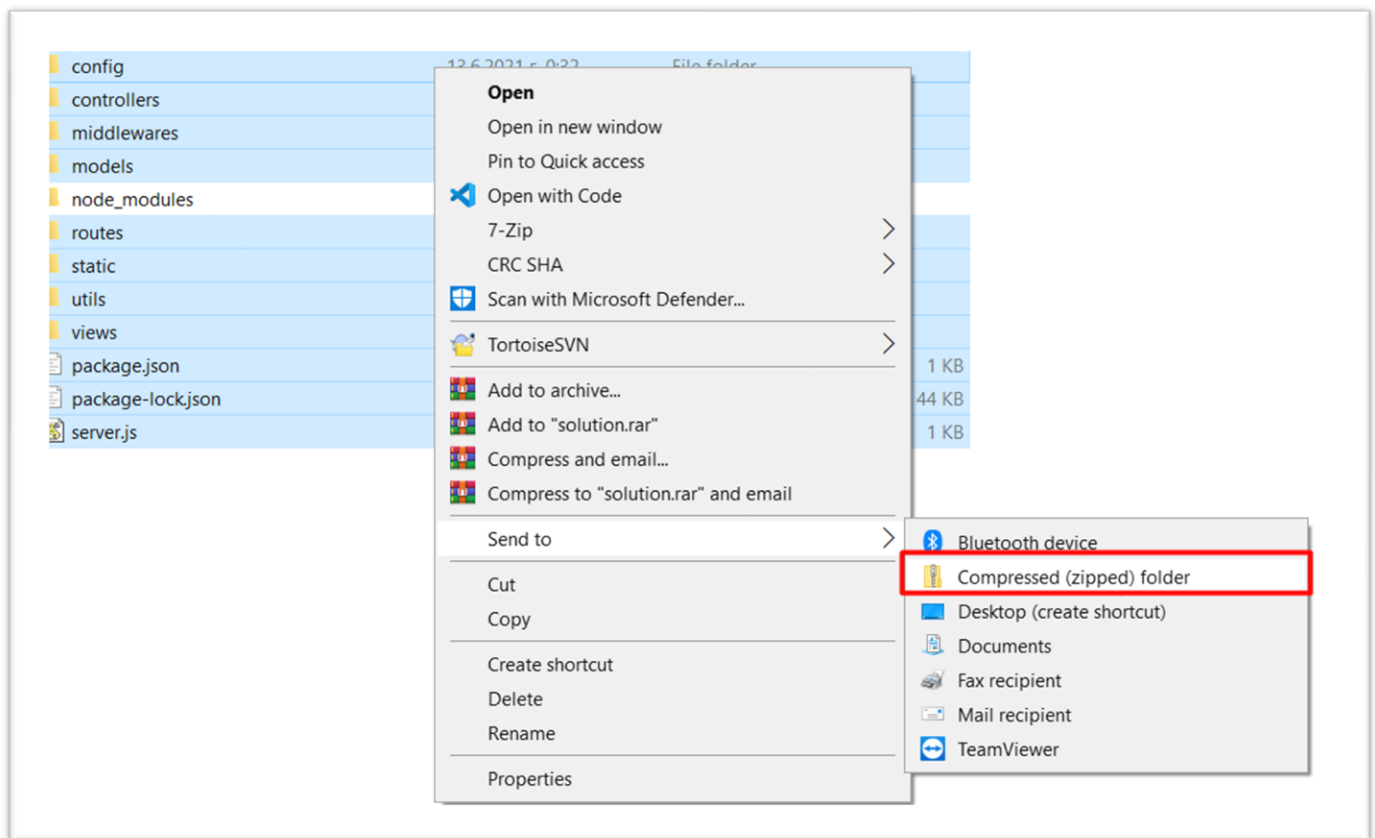


If the current user hasn't closed any auction, display the following message instead:



8. Submitting Your Solution

Place in a **ZIP** file your project folder. Exclude the **node_modules** folder. Upload the archive to Judge.



Shared Trip

Add task

Shared Trip

Participants

Tests

Change

Delete

Условие

Ресурсы

Administration

Select files...

Js-Back-End-Exam.zip

Allowed file extensions: zip,rar
 Allowed working time: 0.100 sec.
 Allowed memory: 16.00 MB
 Size limit: 1024.00 KB
 Checker: Trim

File upload

Submit

Shared Trip

Participants

Tests

Change

Delete

Условие

Ресурсы

Administration

Select files...

Allowed file extensions: zip,rar

Allowed working time: 0.100 sec.

Allowed memory: 16.00 MB

Size limit: 1024.00 KB

Checker: Trim

File upload

Submit

Problem results

Participant	Result
shampion	0 / 100

Submissions

Points	Time and memory used	Submission date
Compile time error		17:24:04 17.06.2021

This is not a problem !

GOOD LUCK! 😊