Main Function:

- The main function is the entry point of the program.

- It initializes two main data structures: `User` and `ElementList`.

- It also initializes a variable `loggedInUser` to keep track of the currently logged-in user.

User Structure:

- Defines a structure called `User` to store information about users.

- Each user has a username (up to 20 characters), a password (up to 20 characters), and an isAdmin flag (1 for admin, 0 for customer).

ElementList Structure:

- Defines a structure called `ElementList` to store a list of integers.

- It has an array `data` to hold the integers and a variable `size` to keep track of the number of elements in the list.

Login Function:

- Takes user input for a username and password.

- Compares the input credentials with pre-defined user data.

- If a match is found, it sets the `loggedInUser` variable to the index of the logged-in user and returns that index. Otherwise, it returns -1 for a failed login.

Admin Menu Function (adminMenu):

- Provides a menu for administrators.

- Options include adding elements to the `ElementList` and displaying its contents.

- Continues running until the administrator chooses to log out.

Customer Menu Function (customerMenu):

- Provides a menu for customers.

- Options include performing linear or binary searches on the `ElementList` for specific elements.

- Continues running until the customer chooses to log out.

Element Manipulation Functions:

- `addElement`: Adds an element to the `ElementList` if there is space.

- `displayElements`: Displays the elements stored in the `ElementList`.

- `linearSearch`: Searches for an element in the `ElementList` using a linear search algorithm.

- `binarySearch`: Searches for an element in the `ElementList` using a binary search algorithm.

Program Flow:

- The program begins by initializing users, the element list, and the `loggedInUser` variable.

- It enters a loop that continues until the user chooses to log out.

- Inside the loop, it checks whether the user is an admin or a customer and displays the respective menu.

- The user can perform various actions based on their role, and the program responds accordingly.

- The loop continues until the user chooses to log out.

Overall, this code demonstrates a basic user authentication system, menu-driven interface, and simple data manipulation functions in C. It allows admins to manage elements in a list and customers to search for elements within that list.