

SESSION PROJECT

420-J13-AS

C9_Advanced Data Structures_Online

gr 06200

Teacher: Housseem Zouaghi

Made by: Aleksei Spiridonov, Iskander Taniyev

Project name:

“CarWashingStation”

About:

Our C++ project is a menu-based car wash management system with admin and user roles. The ‘User’ role allows users to sign up/in to the system, browse the services by their names, and book them into a personal queue. The admin role allows users to add new services, track revenue, decide when to approve a user's booking, and create new admins with user accounts.

Project functionalities:

- We used an unordered map for storing and fast access to accounts.

- The data about accounts, revenue, and services is stored in flat files.

- Data is serialized/deserialized using convenient helper methods.

- All Services are stored in a tree structure (OptionTree).

- All Bookings are stored as queues per user

- Menus are created dynamically(ChoicesForm)

- Finally, includes custom BST and Queue templates

Team contributions:

The work was solid for 2 people, but we did it! We appreciate the opportunity to create such a project. In general, Iskander created the base of the project at first, with a trial working admin-user options and first versions of the money and booking system, search trees, and queues for testing the idea and further planning. Later, Aleksei has polished this base, not only allowing the program to handle searching more efficiently, but also maximizing the Choice form's architecture(option menu), which is the most important part of the User's interaction with the system as well as a convenient way of storing the data.

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You can find our UML diagram within the zip files.