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Structs

Structs Exercise

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Exercise - Demonstrate your knowledge of structs.

Create a contract that adheres to the following specifications.

Contract

Create a contract called `GarageManager`. Add the following in storage:

A public mapping called `garage` to store a list of `Car`s (described below), indexed by address

Add the following types and functions.

Car Struct

Ask a question...

Ctrl+I

Implement a `struct` called `Car`. It should store the following properties:

`make`

`model`

`color`

`numberOfDoors`

Add Car Garage

Add a function called `addCar` that adds a car to the user's collection in the `garage`.
It should:

Use `msg.sender` to determine the owner

Accept arguments for make, model, color, and number of doors, and use those to create a new instance of `Car`

Add that `Car` to the `garage` under the user's address

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Get All Cars for the Calling User

Add a function called `getMyCars`. It should return an array with all of the cars owned by the calling user.

Get All Cars for Any User

Add a function called `getUserCars` . It should return an array with all of the cars for any given `address` .

Update Car

Add a function called `updateCar` . It should accept a `uint` for the index of the car to be updated, and arguments for all of the `Car` types.

If the sender doesn't have a car at that index, it should revert with a custom `error BadCarIndex` and the index provided.

Otherwise, it should update that entry to the new properties.

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Reset My Garage

Add a public function called `resetMyGarage` . It should delete the entry in `garage` for the sender.

Submit your Contract and Earn an NFT Badge! (BETA)

⚠ Hey, where'd my NFT go!?

Testnets are not permanent! Base Goerli will soon be sunset, in favor of Base Sepolia.

As these are separate networks with separate data, your NFTs **will not** transfer over.

Don't worry! We've captured the addresses of all NFT owners on Base Goerli and will include them when we release the mechanism to transfer these NFTs to mainnet later this year! You can also redeploy on Sepolia and resubmit if you'd like!

⚠ Spoiler Alert: Open only if tests fail

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