

CDI

Art Gallery Project – Part 1

Programming Techniques

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Problem Recognition and Initial Definitions

All classes were created accordingly to the class diagrams and steps presented in the project description with the following changes:

- Class Person has a unique field called “fullName” instead of one field for the first name and another for the last name. Consequentially the classes Artist and Curator inherit the same field. This makes the validation of the field size easier and does not affect purpose of the initial fields.
- Class Curator has a method called GetID() that returns the curatorID field, but in the system was created a propriety with an get accessor instead.
- The methods OnChangeCommission and ClearComm of the class Curator were declared but not used nor implemented in the system since there were no obvious use for them.
- Class ArtGallery has only the field gal (type Gallery) since the encapsulation is used and there is no use to the other fields.
- Method CalculateComm (class ArtPiece) was implemented using the absolute value to calculate the difference between the original value and the selling price. This is because while testing using a selling value greater then the estimated price, the curator commission was becoming negative, and since the commission is an amount of money doesn't make sense that the curator loses money in a sell.
- The class Gallery was altered as follows:
 - New methods implemented for searching artists, curators or art pieces, and also methods to delete them.
 - The methods that add an artist, curator and art piece use fewer arguments due the change to full name instead of the first name and last name separated.
 - Method SellPiece returns int instead of boolean so it's possible to know the reason the piece can't be sold.
 - Methods that list the elements registered return string instead of void, so it's possible to know if there are no artists, curators or art pieces registered.

Validations

The system validates the following fields:

- ID (Classes Artist, Curator, ArtPiece)
 - Using regex: exactly 5 characters including letters and numbers
- year (Class ArtPiece)
 - Using regex: exactly 4 digits
- fullName (Class Artist)
 - Using if structure: maximum 40 characters including letters and numbers
- fullName (Class Curator)
 - Using if structure: maximum 30 characters including letters and numbers

- title (Class ArtPiece)
 - Using if structure: maximum 40 characters including letters and numbers
- artistID and curatorID (Class ArtPiece)
 - Using search in the list: validate if the id exists in the system before associate to the piece. An artist or curator not registered can't be associated with an art piece.

Delivery

The project has 2 folders with coding with the following content:

- CGSLibrary (Class Library Project): contains the implementation of the classes Person, Artist, Curator, Gallery.
- ArtGallery (Console Application Project) : contains the implementation of the ArtGallery class using the CGSLibrary reference.

Upgrades

- Upgrade information's registered.
 - Ex: change curator associated with an art piece, change estimated value of an art piece