Team Work: Object-Oriented Application
Loquat Mega Store

Team Loquat:

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Application: An Online Store
Git Repository: http://github.com/Ivorankov/C-OOP-Team-Loquat

Application Purpose:

Loquat Mega Store is an online electronics store, meant primarily for large electronic products such as TV sets, computers (desktop and mobile), radio sets, phones, etc. A special accessories category for smaller items can of course be added if needed. The project is meant to serve as a basis for any straightforward shop made with C#.

The partially implemented user interface is meant to provide a quick preview of the project.

Main components of the store:

Shopping System:
  o User registration and authentication, including data validation and hashing; Serialization for keeping user
     data (work in progress)
  o Customer and Administrator logins
  o Customer Cart for selected items
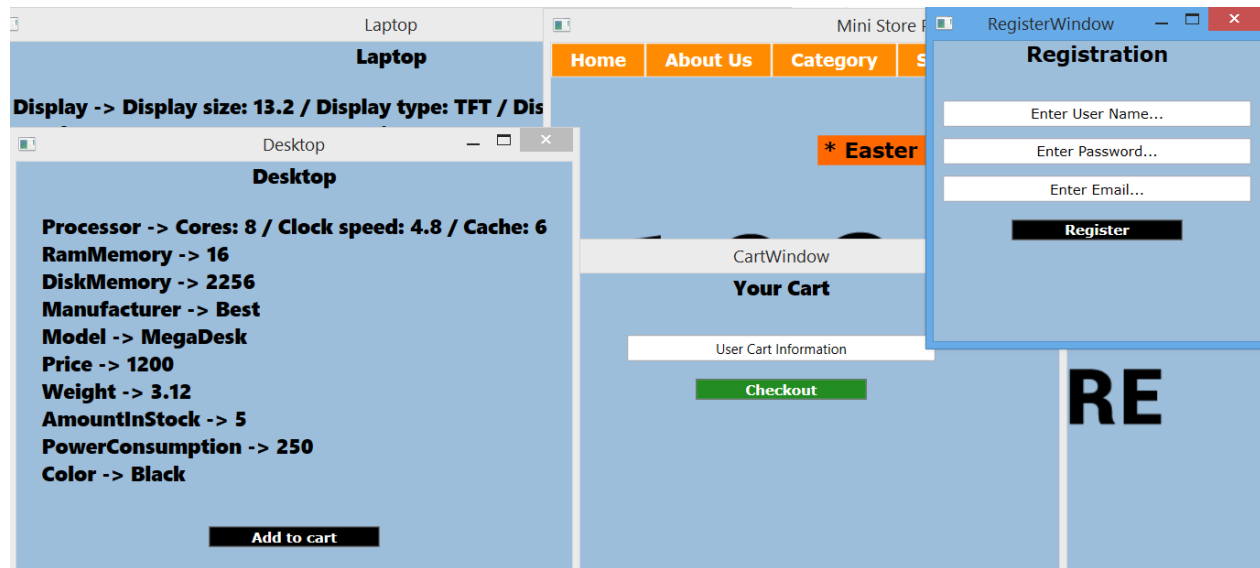 o Customer Order for items added to the cart
Items:
  o Audio Appliances

- o Communication Appliances
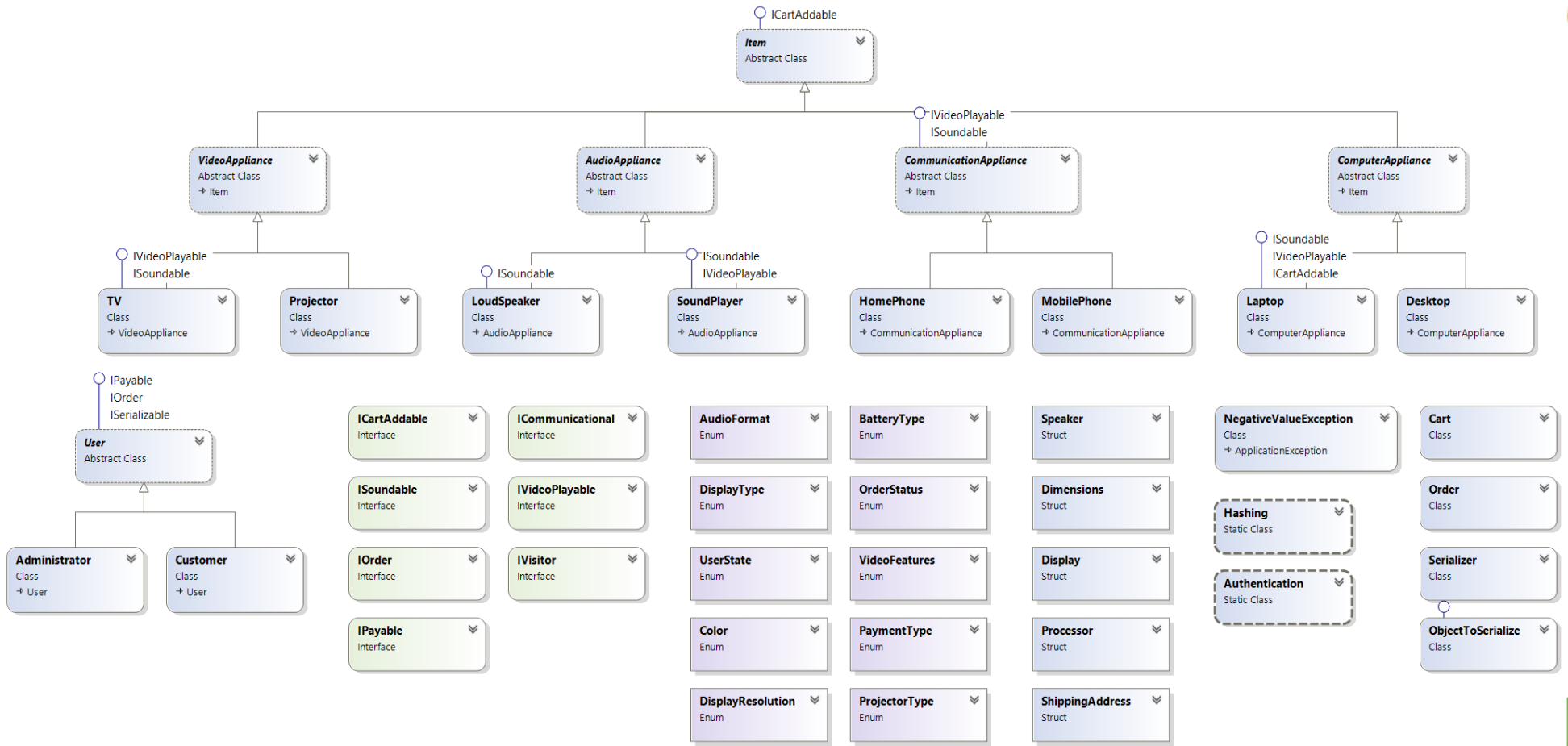- o Computer Appliances
- o Video Appliances

WPF User Interface (work in progress):
- o Home → GitHub repository
- o About Us → Team Members
- o Category → Categories already implemented
- o Shopping Cart and Log In / Register → User interaction (foreseen)

Laptop

Display -> Display size: 13.2 / Display type: TFT / Dis

Desktop

Processor -> Cores: 8 / Clock speed: 4.8 / Cache: 6
RamMemory -> 16
DiskMemory -> 2256
Manufacturer -> Best
Model -> MegaDesk
Price -> 1200
Weight -> 3.12
AmountInStock -> 5
PowerConsumption -> 250
Color -> Black

Add to cart

Mini Store

Home | About Us | Category | S

* Easter

CartWindow

Your Cart

User Cart Information

Checkout

RE

RegisterWindow

Registration

Enter User Name...
Enter Password...
Enter Email...

Register

Assignment Execution:

- ❖ Interfaces: for item specification (e.g. ICommunicational, ICartAddable), for Visitor design pattern
- ❖ Abstract classes with inheritors: for the various items
- ❖ Structures:
  Shipping Address
  Item data: Dimensions, Display, Processor, Speaker
- ❖ Enumerators for:
  User State (New, Active, Blocked, Banned)
  Order Status, Payment Type
  Item features: Projector Type, Video Features, Display Type, Display Resolution, Color, Battery Type, Audio Format
- ❖ Exception: Negative Values Exception, thrown when invalid numerical data is added
- ❖ Visitor Design Pattern: to be used when items are on sale, in order to reduce the price by a certain percentage
- ❖ Events: for handling user interface communication
- ❖ Polymorphism: operations on items, adding items to the cart (irrespective of the item type); possibility to add items to the cart through the ICartAddable interface (e.g. to make sure item is in stock)
- ❖ Optional requirements covered: Namespaces; ToString() overriding; constants; static methods, fields, classes

○ ICartAddable

Item
Abstract Class ⌄

○ IVideoPlayable
ISoundable

VideoAppliance
Abstract Class ⌄
⊹ Item

AudioAppliance
Abstract Class ⌄
⊹ Item

CommunicationAppliance
Abstract Class ⌄
⊹ Item

ComputerAppliance
Abstract Class ⌄
⊹ Item

○ IVideoPlayable
ISoundable

○ ISoundable

○ ISoundable
IVideoPlayable

○ ISoundable
IVideoPlayable
ICartAddable

TV
Class ⌄
⊹ VideoAppliance

Projector
Class ⌄
⊹ VideoAppliance

LoudSpeaker
Class ⌄
⊹ AudioAppliance

SoundPlayer
Class ⌄
⊹ AudioAppliance

HomePhone
Class ⌄
⊹ CommunicationAppliance

MobilePhone
Class ⌄
⊹ CommunicationAppliance

Laptop
Class ⌄
⊹ ComputerAppliance

Desktop
Class ⌄
⊹ ComputerAppliance

○ IPayable
IOrder
ISerializable

User
Abstract Class ⌄

Administrator
Class ⌄
⊹ User

Customer
Class ⌄
⊹ User

ICartAddable
Interface ⌄

ICommunicational
Interface ⌄

AudioFormat
Enum ⌄

BatteryType
Enum ⌄

Speaker
Struct ⌄

NegativeValueException
Class ⌄
⊹ ApplicationException

Cart
Class ⌄

ISoundable
Interface ⌄

IVideoPlayable
Interface ⌄

DisplayType
Enum ⌄

OrderStatus
Enum ⌄

Dimensions
Struct ⌄

Order
Class ⌄

IOrder
Interface ⌄

IVisitor
Interface ⌄

UserState
Enum ⌄

VideoFeatures
Enum ⌄

Display
Struct ⌄

Hashing
Static Class ⌄

Serializer
Class ⌄

IPayable
Interface ⌄

Color
Enum ⌄

PaymentType
Enum ⌄

Processor
Struct ⌄

Authentication
Static Class ⌄

ObjectToSerialize
Class ⌄

DisplayResolution
Enum ⌄

ProjectorType
Enum ⌄

ShippingAddress
Struct ⌄

Commits Overview:

Mar 22, 2015 – Apr 8, 2015

Contributions to master, excluding merge commits

Contributions: **Commits ▾**

Ivorankov #1
53 commits / 5,262 ++ / 2,805 --
03/29/2015

LyubaG #2
19 commits / 2,036 ++ / 1,410 --
03/29/2015

vesheff #3
13 commits / 1,438 ++ / 278 --
03/29/2015

Alex-Bubblemaster #4
10 commits / 1,052 ++ / 1,040 --
03/29/2015

dpanayotov93 #5
5 commits / 543 ++ / 364 --
03/29/2015

dilyantraykov #6
4 commits / 404 ++ / 209 --
03/29/2015

plamenvt #7
4 commits / 124 ++ / 24 --
03/29/2015