CS 417: Group1

Final Project: Emotional Robot

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Our Goal

- To create a robot that can react to an image and display how it’s “feeling.”
- To do this using design patterns, such that the code is **modular** - new emotions, personality types, and responses can be appended easily.

Key Patterns

We will be discussing:

- **Strategy** - creates an object determining which way the robot will interpret what it sees
- **Factory (w/ Composite as a product)** - produces the “emotion” objects that the robot will interpret, based on what the camera sees.
- **Builder** - builds the string that the robot will tweet, part by part

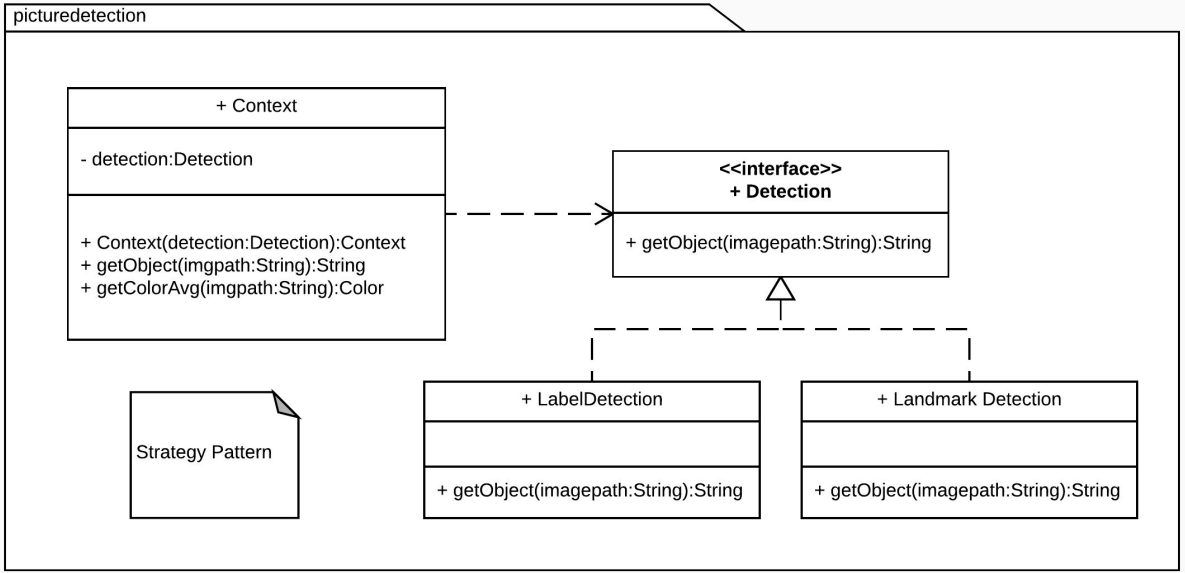
Strategy
(behavioral pattern)

Classes

- Context
- Detection <interface>
- Label Detection
- Landmark Detection

Methods

- Context
- getObject
- getColorAvg



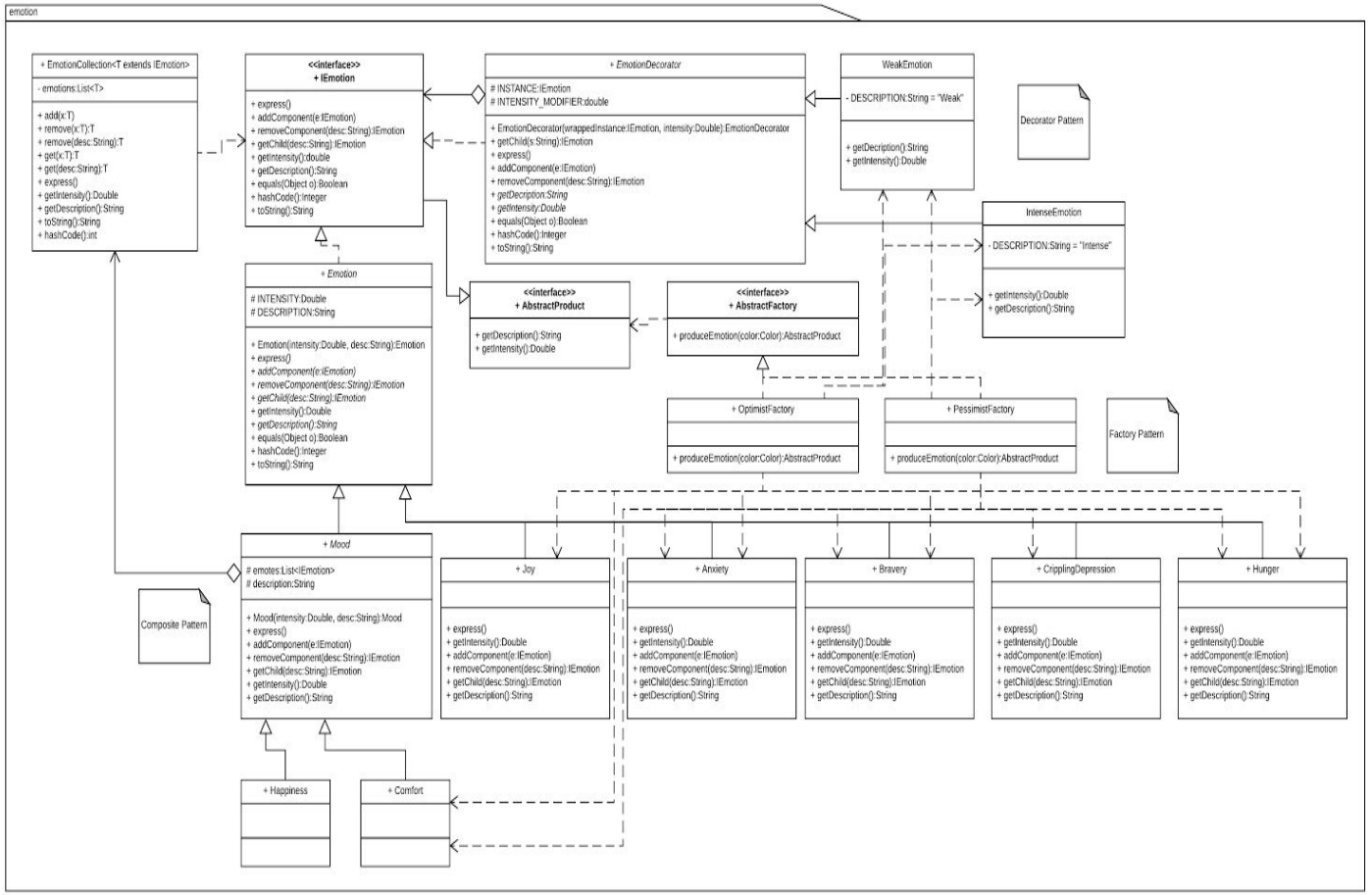
Factory (creational pattern), Composite, and Decorator (Structural Patterns)

Classes

- Context
- Detection <interface>
- Label Detection
- Landmark Detection

Methods

- Context
- getObject
- getColorAvg



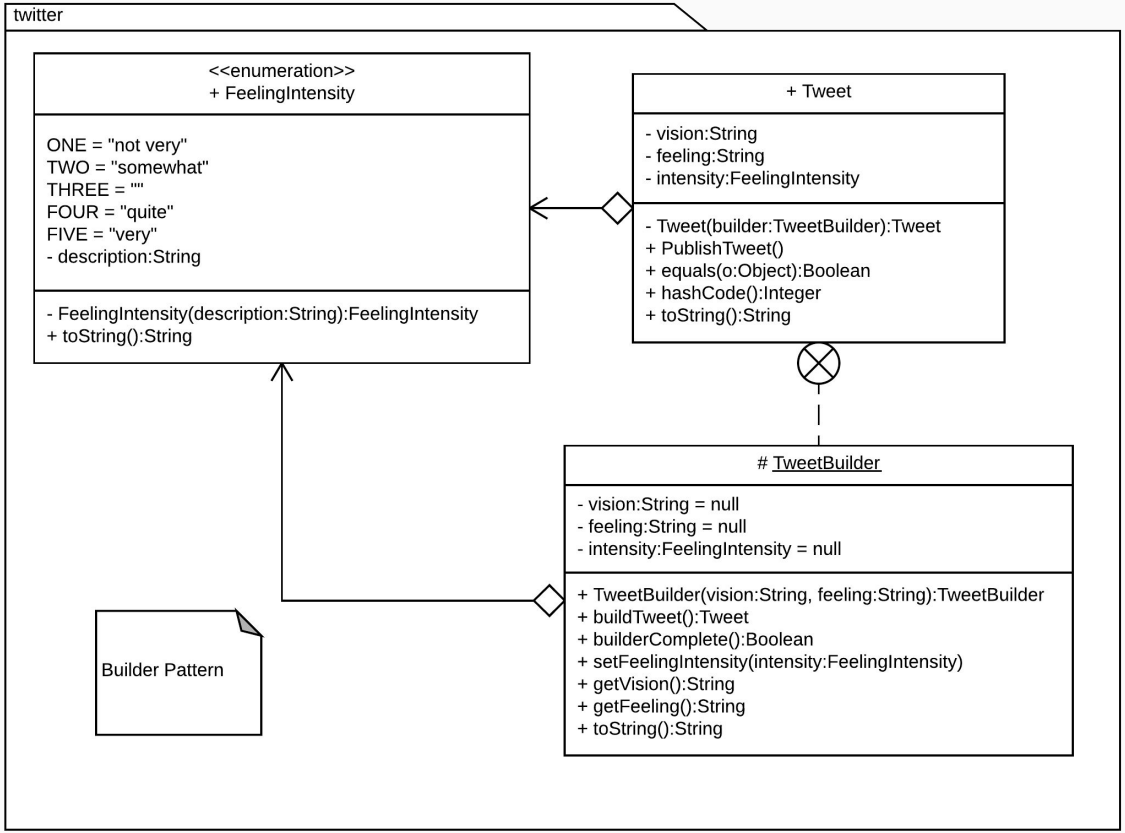
Builder
(Creational Pattern)

Classes

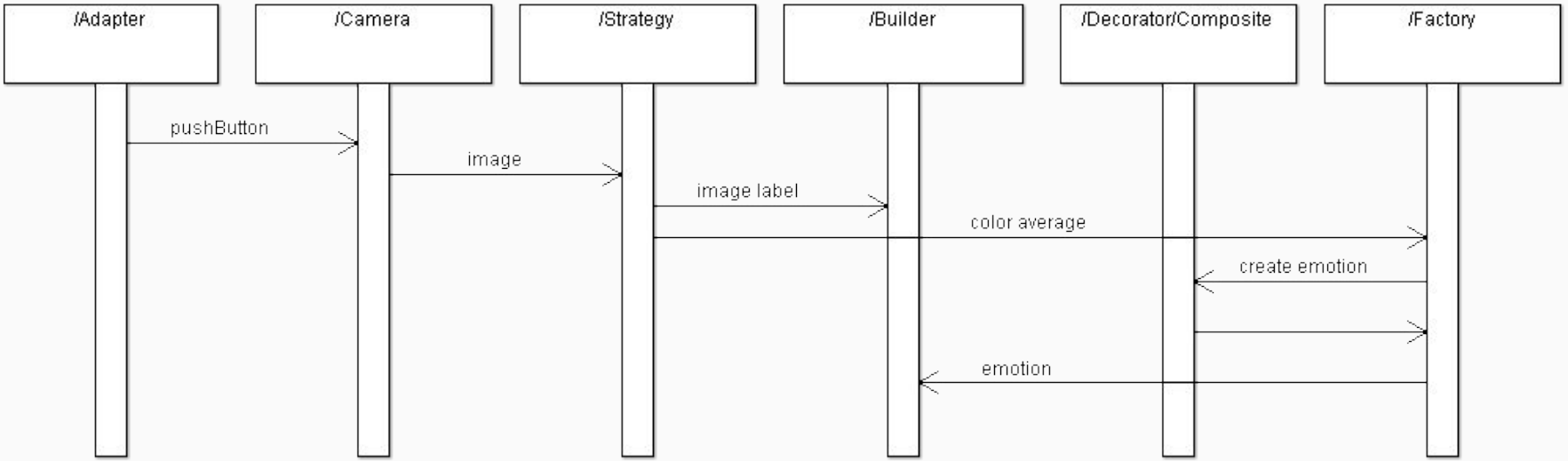
- Tweet
- TweetBuilder
- FeelingIntensity (enum)

Methods

- PublishTweet
- buildTweet
- builderComplete
- setFeelingIntensity
- getVision
- getFeeling



Demonstration



What would we change?

Patterns, Ideas, Time Management, etc.

Questions?