

Homework Sheet 05

1

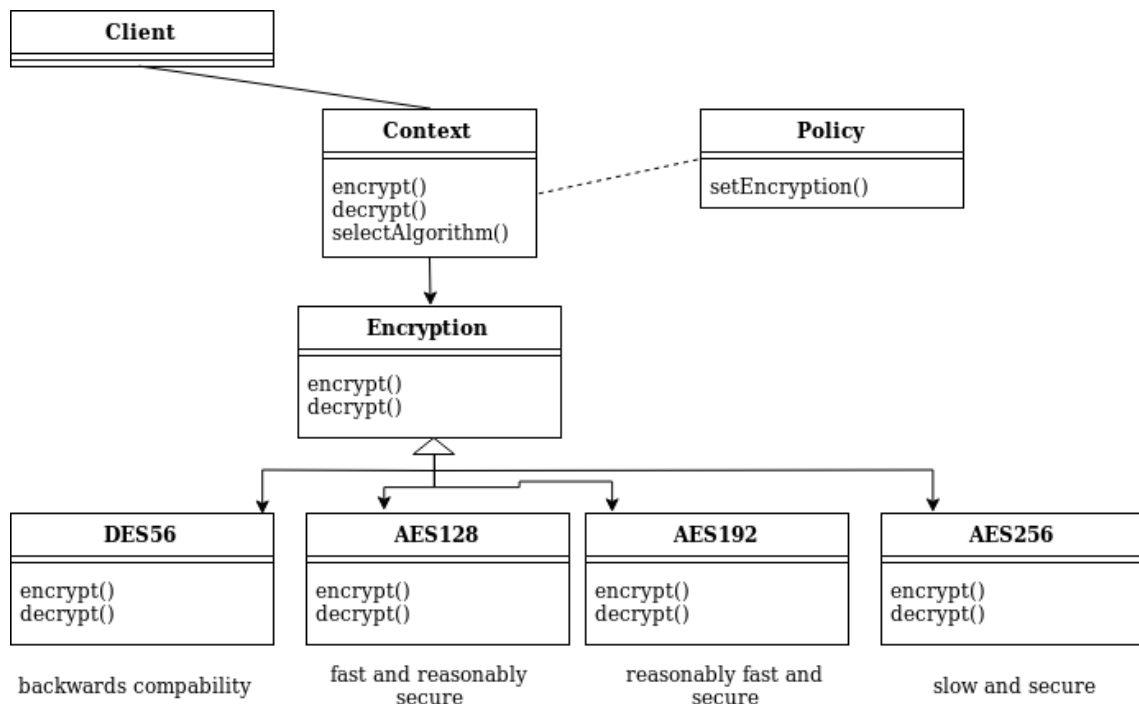
| | Product | Profile | Order | MarketingService | Offer |
|---------------------|--------------------------|----------|----------|------------------|---------------------|
| StoreAdministrator | setPrice() | | | provide() | «create», perform() |
| Supplier | «create», update-Info() | | «create» | | |
| RegisteredCustomer | browseInfo(), purchase() | update() | x | x | x |
| UnregisteredWebuser | getInfo() | «create» | x | x | x |

2

- Rectangle from Polygon: Specification inheritance
- Set from BinaryTree: Implementation inheritance
- Set from Bag: Specification inheritance
- Player from User: Specification inheritance

3

4



In this model one uses the Strategy Pattern to model the different encryption methods. The encryption method used is determined by the `setEncryption()` method in the **Policy** class, using the DES algorithm with 56 bit for legacy systems with necessary backwards compability, and AES encryption of different strengths for different levels of security and speed (systems with less secure encryption use smaller key sizes, systems with bigger security requirements use longer key sizes). Every encryption request is routed through a **Context**, which calls the `selectAlgorithm()` method, which in turn uses the **Policy** class.

5

Inheritance copies all methods and attributes from one class to a new class and then extends this class (possibly overwriting existing methods and attributes). It uses specified functionality from the parent class. Delegation calls a method from a foreign class, it uses already implemented functionality.