Report #1 – Part 2

For

“Better Automobile Inventory Management”

CSCI441\_VA

Software Engineering

Fall 2019

<https://github.com/gculver/SoftwareEngineering_FinalProject>

Team:

Paul Whitely

James Cox

Grant Culver

October 1, 2019

Revision History:

|  |  |
| --- | --- |
| Version No. | Date of Revision |
| v.1 | 9/7/2019 |
| v.2 | 9/23/2019 |
| v.3 | 10/1/2019 |

**Contents**

Contents

7 Class Diagram and Interface Specification

7.1 Class Diagram………………………………………………………………………...4

7.2 Data Types and Operation Signatures……………………………………………..5

7.3 Traceability Matrix…………………………………………………………………….7

**7. Class Diagram and Design Patterns**

7.1 Class Diagram



7.2 Data Types and Operation Signature

1. User

(a) Attributes

\* int user\_id: identification number of the user

\* string username: username for the user to login and access the system.

\* char password: password user uses to authenticate login.

\* boolean active: to indicate whether the user is active or inactive.

\* char email\_address: email address of the user to identify user.

(b) Operations

\* setUserID(): set the user id

\* getUserID(): get the user id

\* setActive(): sets the user as active(true) or inactive(false)

\* getActive(): gets the activation status of user

\* setEmailAddress(): sets the users email address

\* getEmailAddress(): retrieves the users email address

2. FetchData

(a) Attributes

\*

(b) Operations

\* getData(): fetch settings from the database that were set up when system was configured.

\*

3. InvSettings

(a) Attributes

\* int monthSupply: sets the desired month supply of inventory for dealership.

\* int cars: sets the inventory level for cars.

\* int trucks: inventory level for trucks.

(b) Operations

\* setMonthSupply(): sets the desired month supply of total inventory for dealership.

\* setCarSupply(): sets the desired month supply for cars.

\* setTruckSupply(): sets the desired month supply for trucks.

\* getMonthSupply()

\* getCarSupply()

\* getTruckSupply()

4. CalcSettings

(a) Attributes

(b) Operations

\* fetchInvSettings()

\* calcSupply(): Calculates supply on the information provided.

\* toString(): Displays data to the user

5. Database

(a) Attributes

\* \_db: Singleton connection object.Establishes connection with database server and reads data from server.

(b) Operations

\* \_construct(): Disallows creating a new object of the class with new Database()

\* \_clone(): disallow cloning of the class

\* getInstance(): Establishes connection with database server and reads data from server.

6. Config

(a) Attributes

\* DB\_HOST: Identifies server.

\* DB\_NAME: Identifies database name.

\* DB\_USER: Identifies user.

\* DB\_PASS: User password.

(b) Operations: None. Just a standard configuration class.

7.3 Tracability Matrix