The below (example) xml structure is used to import vehicle fleet information (via a web service) into a new Fleet Management application developed and hosted by Mitchell.

<Fleet>

<NickName>City of San Diego Vehicle Fleet</NickName>

<Vehicles>

<Bus>

<Year>1991 </Year>

<Make>Ford</Make>

<Model>Econline </Model>

</ Bus >

< Truck>

<Year>2004 </Year>

<Make>Toyota</Make>

<Model>Tundra</Model>

</ Truck >

<Motorcycle>

<Year>2008 </Year>

<Make>Kawasaki</Make>

<Model>Ninja</Model>

</Motorcycle>

<Boat>

<Year>2012 </Year>

<Make>SeaForce</Make>

<Model>UltraHi</Model>

<Type>Motor</Type>

<Boat>

<Boat>

<Year>2000 </Year>

<Make>WindForce</Make>

<Model>UltraHi</Model>

<Type>Sail</Type>

<Boat>

</Vehicles>

</Fleet>

A Fleet is defined as an unbounded collection of buses, trucks, motorcycles and boats.

1. All vehicles have year/make/model.

Before fleet data can be successfully imported into the new application data store, below validation criteria must pass.

Validation Criteria:

1. All Year/Make/Model combinations must be valid.

Design an object model to support the above stated system requirements.

Step2

A new requirement is introduced with following specifications –

1. All land and sea vehicles have VIN Numbers.

2. All sea vehicles have Nautical Registration Numbers.

<Fleet>

<NickName>City of San Diego Vehicle Fleet</NickName>

<Vehicles>

<Bus>

**<VinNumber>75644444335434516</VinNumber>**

<Year>1991 </Year>

<Make>Ford</Make>

<Model>Econline </Model>

</Bus>

< Truck>

**<VinNumber>23124124654433511</VinNumber>**

<Year>2004 </Year>

<Make>Toyota</Make>

<Model>Tundra</Model>

</ Truck >

<Motorcycle >

**<VinNumber>52543463463234534</VinNumber>**

<Year>2008 </Year>

<Make>Kawasaki</Make>

<Model>Ninja</Model>

</ Motorcycle >

<Boat>

**<VinNumber>52543463463234534</VinNumber>**

**<NauticalRegistrationNumber>123-124XJHDGSGD</NauticalRegistrationNumber>**

<Year>2012 </Year>

<Make>SeaForce</Make>

<Model>UltraHi</Model>

<Type>Motor</Type>

</ Boat>

<Boat>

**<VinNumber>52543488463234534</VinNumber>**

**<NauticalRegistrationNumber>999-124XJHDGSGD</NauticalRegistrationNumber>**

<Year>2000 </Year>

<Make>WindForce</Make>

<Model>UltraHi</Model>

<Type>Sail</Type>

<Boat>

</Vehicles>

</Fleet>

Before fleet data can be successfully imported into the new application data store, all validation criteria must pass.

Validation Criteria:

1. All Year/Make/Model combinations must be valid.

**2.** **All VIN Numbers must have a valid format.**

**3. All Nautical Registration Numbers must have a valid format.**

Modify existing design to accommodate above stated system requirements.

Step 3

A new requirement is introduced with following specifications –

1. All land vehicles have License Plate Numbers.

<Fleet>

<NickName>City of San Diego Vehicle Fleet</NickName>

**<Country>United States</Country>**

<Vehicles>

<Bus>

<VinNumber>75644444335434516</VinNumber>

**<LicensePlateNumber>4BH241</LicensePlateNumber>**

<Year>1991 </Year>

<Make>Ford</Make>

<Model>Econline </Model>

</ Bus >

< Truck>

<VinNumber>23124124654433511</VinNumber>

**<LicensePlateNumber>9342BX</LicensePlateNumber>**

<Year>2004 </Year>

<Make>Toyota</Make>

<Model>Tundra</Model>

</ Truck >

<Motorcycle>

<VinNumber>52543463463234534</VinNumber>

**<LicensePlateNumber>1WST32</LicensePlateNumber>**

<Year>2008 </Year>

<Make>Kawasaki</Make>

<Model>Ninja</Model>

</ Motorcycle >

<Boat>

<VinNumber>52543463463234534</VinNumber>

<NauticalRegistrationNumber>123-124XJHDGSGD</NauticalRegistrationNumber>

<Year>2012 </Year>

<Make>SeaForce</Make>

<Model>UltraHi</Model>

<Model>UltraHi</Model>

<Type>Motor</Type>

</ Boat >

</Vehicles>

</Fleet>

Before fleet data can be successfully imported into the new application data store, all validation criteria must pass.

Validation Criteria:

1. All Year/Make/Model combinations must be valid.

2. All VIN Numbers must have a valid format.

3. All Nautical Registration Numbers must have a valid format.

4**. All License Plate Numbers must have a valid format (per the formatting rules of the customer's country of origin).**

Modify existing design to accommodate above stated system requirements. Ideally, once all vehicles have been rolled up into a collection, the validation of all vehicles can occur in a single method call.