

# Coding Exercise

Write a program called *importManufacturingData* to import data files provided by a manufacturer of devices into a database (preferably MongoDB).

We strongly prefer that you write the code in Javascript targeting the node.js platform.

We suggest you timebox your effort to 2 hours.

We kindly expect the result as zipped folder, in return.

## Specifications

- The executable will take 2 inputs: the type of the device to import and the file to import.
- The provider's file's first line includes a headers line.
- For each device type, the *importManufacturingData* will know what headers are expected through some configuration.
- If a column is missing, the executable will fail and report the missing column.
- The system will do a best effort to import, i.e. it might need to do some cleanup (for example remove extra space).
- The system will abort if there is a missing required column.
- The system will not import a row if some data doesn't match the specified criteria.
- It will tally the failures and report success count, failure count, failed serialNumbers and failure cause.
- The system will not overwrite any data for a device that is already the database (you can assume that the serialNumber is unique).
- The system should be able to import new device types just by adding a configuration for that device.

## Configuration description

For each type of device, the configuration will specify the following:

- *header*: the header in the file to import
- *ignore*: whether to ignore the data, ignore if true
- *dbName*: the database field in which the data should be saved
- *criteria*: a regular expression the data should match before importing
- *type*: the type of the field

## Sample configurations

**device:** connect

**expected headers:**

header	Ignore	dbName	criteria	Type
BLPassword	true	-	-	-
serialNumber	false	serialNumber	^([0-9A-Z]{10})\$	string
skuNumber	false	skuNumber	^(AUG-AC[0-9]{2}) (02-01-001)\$	string
macAddressWiFi	false	wifiMacAddress	mac address format	string
shipDate	false	shipDate	ISO8601 date	date

**device:** doorbell

**expected headers:**

header	Ignore	dbName	criteria	type
serialNumber	false	serialNumber	^(D1[0-9A-Z]{8})\$	string
skuNumber	false	skuNumber	^(AUG-AB[0-9]{2}) (02-01-001)\$	string
augfirmware	false	augfirmware	semver	string
battserialnumber	false	batterySerialNumber	^([0-9A-Z]{10})\$	string