

# SupplyHouse.com Programming Test

## Disclaimer

The following problem is a simplified version of an actual programming task at SupplyHouse. Your solution will not be used for any other purpose than evaluating programming skills of candidates.

## Instructions

Please return the answers within **96 hours of the receipt of these questions**, in the form of **email attachments**. Refer to our email for the exact time we expect to receive your solutions.

For clarification of the problems and submitting solutions, use [devinterview@supplyhouse.com](mailto:devinterview@supplyhouse.com). Include "[JAVA]" (with the square brackets) in the subject line when you turn in your work.

Because we intentionally leave the problem open-ended in order to see how you make assumptions, you should try to limit your clarification questions only for the purpose of understanding what is being asked.

**Please do not post the questions/answers on the web or distribute them in any form.** We want our assessment to be accurate and fair to all candidates.

## Problem

As a distributor, SupplyHouse receives daily inventory feeds from our suppliers and needs to extract data to store in our supplier inventory table. We want to have an automated job, scheduled daily, that processes each supplier file from a common directory and inserts into/updates table SUPPLIER\_PRODUCT.

Table	Column	Notes
SUPPLIER_PRODUCT	SUPPLIER_ID *	Primary key is (SUPPLIER_ID, PRODUCT_ID)
	PRODUCT_ID *	
	QUANTITY	

The feeds are different for each supplier, and the type can be either tab-delimited text, CSV, or Excel files. They are transferred to the same directory on our server with standardized names (<supplierID>.extension). Some suppliers may have extra columns in the feed, but they all guarantee to provide one column containing the product ID and one column containing the quantity (whose column indices can vary from supplier to supplier). Each product ID appears only once in a file.

Sample supplier feeds:

### - Supplier A (CSV):

```
Product,Price,Quantity,LastUpdated
DEFG,40.17,2,2013-10-02
ABC,10.30,15,2014-11-26
HIJ,152.45,53,2014-02-17
```

### - Supplier B (tab-delimited):

```
row_number    product      brand  inventory
1      KLMN    Honeywell  34
2      HIJ      Taco      452
3      OPQ      Panasonic  77
4      ABC      Taco      10
```

Design the Java classes, their member variables and methods signatures to support this automation project, with a focus on how to handle different file types and formats. Feel free to use supporting database tables if necessary (specify columns, primary keys, foreign keys). As with Question 1, please include any assumptions you make.

Deliverables:

- Java files with class skeletons, and sufficient in-file documentation. Don't implement any method, as we are only interested in how you design data structures.
- A document file (text, Word, PDF, or any format that we can likely open) describing the database schema, if you use tables.

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