Dev candidate assessment Regesta

Congratulazioni per aver deciso di sfidare te stesso in questo test!

Ti preghiamo di leggere attentamente le linee guida e di restituirci quanto richiesto entro una settimana da oggi nelle modalità sotto indicate.

L'obiettivo di questo test è comprendere se le tue competenze siano allineate al nostro punto di partenza per la crescita professionale in Regesta: partiamo col piede giusto!

Per qualunque domanda puoi rivolgerti a leonardo.pellegrini@regestaitalia.it

Buon lavoro!

Linee guida

- Scegli liberamente il linguaggio di programmazione ed il DB che preferisci, per l'interfaccia utente usa tecnologie web.
- Concentrati sulle funzionalità del software e scrivi il miglior codice possibile
- Carica in GITHub il sorgente e documenta l'architettura implementata e le scelte tecniche tutto con un README file riassuntivo, ma esaustivo
- Fornisci una guida sull'utilizzo del software, corredata da casi di esempio
- *Facoltativo*: Applica i paradigmi del TDD/BDD e scrivi un'analisi delle funzionalità in questo formato

Narrative

A short introductory section with the following structure:

- **As a**: the person or role who will benefit from the feature;
- **I want**: the feature;
- **so that**: the benefit or value of the feature.

Acceptance criteria

A description of each specific scenario of the narrative with the following structure:

- **Given**: the initial context at the beginning of the scenario, in one or more clauses;
- **When**: the event that triggers the scenario;
- **Then**: the expected outcome, in one or more clauses.

- *Facoltativo*: realizza classi di unit test e di test automatici eseguibili massivamente all'occorrenza (es: modifiche sostanziali al codice, introduzione nuove funzionalità)

Purchase orders for stock replenishment

This problem requires some kind of input. You are free to implement any mechanism for feeding input into your solution (for example, using hard coded data within a unit test). You should provide sufficient evidence that your solution is complete, by indicating that it works correctly against the supplied test data at least.

Problem

Your shop sells goods that you can buy from different suppliers. The selling price of each article is fixed, but you should be able to buy that article from one supplier instead of another depending on purchase price and discounts.

The discount percentage a supplier could offer can be related to the total order value, to the ordered quantity or could be limited to a particular date/season.

When you need to order an article, you choose an item and the quantity you want to buy; the system should find which suppliers do sell that article (check if enough quantity is available in stock) and calculate the total purchase order amount applying the discounts (if available). The result list should suggest the best supplier highlighting the cheapest one.

Also display the minimum days that each supplier needs to ship your order; this way you can choose that a faster supplier is still better than a cheaper one.

EXAMPLE 1

Input:

12x Philips monitor 17”

- Supplier 1 has 8pcs in stock at 120€ each, and offers 5% discount for purchases of minimum 1000€. Min. days to ship order is 5
- Supplier 2 has 15pcs in stock at 128€ each, and offers a 3% discount if you order >5pcs and 5% discount if you order >10pcs. Min. days to ship order is 7
- Supplier 3 has 23pcs in stock at 129€ each, and offers a discount of 5% for orders over 1000€. It also offers an additional discount of 2% for orders placed in september.. Min. days to ship order is 4

Output:

- Supplier 1 is not prompted because it does not have enough stock quantity available.
- Supplier 2 can fulfill the request for 1’459.20€.
- Supplier 3 can fulfill the request for 1’441.19€; this is the cheapest one so it should be highlighted

EXAMPLE 2

Input:

12x Philips monitor 17”
order date is november 2021

Output:

This time, Supplier 3 can fulfill the request for 1’470,60€ and so Supplier 2 should be highlighted as it is the cheapest one; it should be highlighted even if Supplier 3 is faster (4 days instead of 7), as you still decide where to buy