

# Code Assignment

You work in an e-commerce platform as a software engineer. A new campaign module which manipulates prices according to demand, is brought to you as an important business requirement.

- You have products, orders and campaigns in your domain.
- You create a product with product code, price and stock.
- You create an order with product code and quantity. Price can be assumed the current price of product at that moment.
- You create a campaign with a name, a product code, duration, price manipulation limit and target sales count.
- Campaign starts after creating and ends after given duration.
- Duration is given in hours.
- A price manipulation limit is the percentage that you can increase or decrease the price of product according to demand
- Target sales count is the product quantity you want to sell during the campaign.
- You are free to design your algorithm for how to calculate demand and how to increase and decrease the price during the campaign.

You will have scenario files in the context of this assignment.

- Scenario files have commands for the operations defined in business requirements.
- Additionally, there is an increase-time command for manipulating time during a scenario.
- Your program will read scenario file and produce output for each command.
- You are free to choose the programming language (C#, Java, C++, Go)
- The first table given defines each command with happy-path outputs
- The second table given shows an example scenario and its output.

Command	Sample Output
create_product PRODUCTCODE PRICE STOCK	Product created; code P1, price 100, stock 1000
get_product_info PRODUCTCODE	Product P1 info; price 100, stock 1000
create_order PRODUCTCODE QUANTITY	Order created; product P1, quantity 3

create_campaign NAME PRODCUTCODE DURATION PMLIMIT TARGETSALESCOUNT	Campaign created; name C1, product P1, duration 10, limit 20, target sales count 100
get_campaign_info NAME	Campaign C1 info; Status Active, Target Sales 100, Total Sales 50, Turnover 5000, Average Item Price 100
get_campaign_info NAME	Campaign C1 info; Status Ended, Target Sales 100, Total Sales 80, Turnover 9000, Average Item Price 112
increase_time HOUR	Time is 01:00

Scenario	Output
create_product P1 100 1000	Product created; code P1, price 100, stock 1000
create_campaign C1 P1 5 20 100	Campaign created; name C1, product P1, duration 10, limit 20, target sales count 100
get_product_info P1	Product P1 info; price 100, stock 1000
increase_time 2	Time is 02:00
get_product_info P1	Product P1 info; price 95, stock 1000
increase_time 2	Time is 04:00
get_product_info P1	Product P1 info; price 90, stock 1000
increase_time 2	Time is 06:00

get_product_info P1	Product P1 info; price 85, stock 1000
increase_time 2	Time is 08:00
get_product_info P1	Product P1 info; price 80, stock 1000
increase_time 2	Time is 10:00
get_product_info P1	Product P1 info; price 100, stock 1000
get_campaign_info C1	Campaign C1 info; Status Ended, Target Sales 100, Total Sales 0, Turnover 0, Average Item Price –

\*Price changing strategy in this example follows a linear pattern, you do not have to implement exactly same pattern.

Following criterias will be considered during the evaluation of the code assignment:

- Code should run as expected.
- Code Quality (Clean Code, SOLID, Applying Patterns “if necessary”, and other Software Craftsmanship techniques)
- Readability
- Unit testing. TDD approach will be favored.
- Packaging (how easy it is to run the code)
- Domain Modeling

You have **5 days** to fulfill the assignment. Plz, keep in touch with us regarding to any enquiries w/ the assignment => [mplisting@hepsiburada.com](mailto:mplisting@hepsiburada.com)

Good luck :)