

# Simulate the section of a super market which handles perishable items

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# Problem Defenition

- With reference to the problem statement, the first thing that came to our mind was that our project should track and handle item inventory and their respective expiry dates.
- When the item expires, the product quantity should become zero.
- We should be able to handle the product getting sold out.
- Or if the product is still in stock and the product has expired, we should be able to show by how many days it has expired.

# Our approach to solving the problem

- We have decided to use heap data structure to solve this problem.
- We have used functions like `heapify()`, `heapSort()`, `checkExpiry()` to do our basic operations.
- `goToNextDay()` function simulates the passing of a day. When this is called, expiry values of all the items decrement by 1.
- We also simulated the “throwing” of the items once they are expired. Basically, the item quantity becomes zero because, a supermarket would not sell something that's expired.

# Assumptions

- We have assumed the number of products and their names. Also, their number of days left for expiry. These are used as variables and are declared in a global scope.

# Limits and constraints

- Our application is limited predefined set of variables (The globals mentioned in the previous slide) that indicate the inventory and cannot be changed as and when wanted by the supermarket.

# Known defects in the program

- Inventory and price management has not been implemented.
- Initial versions of the program had a few bugs. The user was able to buy the product even when it was expired. The user was not able to return to the menu if he/she gives an incorrect choice entry.
- Remark: These bugs have been fixed and final version of the program has been submitted.

THANK YOU!