Client is implementing “**Inventry Management System**” client server application with backend Mysql/Oracle database to perform below operations.

1.Assume Product table exist with following sample data.

Productid,name,mDate,useBeforemonths,eDate,price

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| productID | Name | ManufacturingDate | useBeforeMonths | ExpDate | Price |
| 101 | softdrink | 20/12/2022 | 3 | null | 60 |
| 102 | readymixchat | 20/09/2022 | 1 | null | 50 |
| 103 | cream | 20/11/2022 | 2 | null | 300 |
| 104 | Ghee | 20/10/2022 | 4 | null | 500 |
|  |  |  |  |  |  |

2.Perform following operations to accept new product from client using HTML page and persist in database passing values through controller,service and dao.

* addProduct(Product p)

3.Perform validations on Productid cannot be null and Name cannot be null and length should be max 15 chars ,starting with Alphabet.

4.Perform update product operation so that for all products in table should be updated Expiry date with adition of 2 columns ,Manyfacturingdate + usebefore months

* updateProductbyExpiryDate(ProductList plist) -> expDate should be calculated

5.Perform delete operation so that all expiry products should be deleted.

* deleteProductByExpiryDate(ProductList plist) ->all expiry products need to be deleted

6.Perform read operation to generate a report with all existing products in the order of expiry date

* List<Product> listAllProducts()

7.Perform delete operation to delete product for given productID

* Boolean deleteProductbyId(Integer id)

8.Perform update operation to update any of the product details

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| productID | Name | ManufacturingDate | useBeforeMonths | ExpDate | Price |
| 101 | softdrink | 20/12/2022 | 3 | null | 60 |

* Boolean updateProductbyId(Product product)

9.Junit test cases need to be implemented for validate method of PRoductServiceImpl and all methods of ProductDAOImpl class

10.Streams and lambda can be implemented (optional)

Classes need to be implemented:

com.ims.model -> Product.java

com.ims.exception: ProductListEmptyException

com.ims.test: ProductServiceImplTest,ProductDAOImplTest

com.ims.util: DbConn.java

com.ims.service : ProductService, ProductServiceImpl

com.ims.dao :ProductDao,ProductDaoImpl

com.ims.validator : ProductValidator

com.ims.controller :ProductController/ ( servlet/jsp an one can be implemented)

Use HTML files for UI layer