AeroPlastics Design Phase

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Repository: [vladimirovbobi/AeroPlastics (github.com)](https://github.com/vladimirovbobi/AeroPlastics)  
IntelliJ IDE

Database Schema

**Products/Inventory**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| productID | productName | price | rawMaterial | inventoryLevel |

**Materials/Inventory**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| materialID | materialName | moldTemperature | Plastic Density | inventoryLevel |

**Customer**

|  |  |  |  |
| --- | --- | --- | --- |
| customerID | firstName | lastName | company |

**Vendor**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| vendorID | companyName | rawMaterial | price | orderPlaced | arrivalDate |

**Employee**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| employeeID | firstName | lastName | username | password | Role(bool isAdmin) |

**Order**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| orderID | cartID | address | isShipped | customerID |

**Cart**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| cartID | amount | orderDate | deliveryDate | productID  (PI) | ProductQuantity (PQ) | PI  Can be null | PQ Can be null | PI  Can be null | PQ Can be null |

Features/Functionality

**Features**

* **User Registration/Login**
* **Inventory and supply database with resupply**

*Product and raw material supply can be tracked and flagged if inventory is too low. User can order more raw material and request for more product to be manufactured.*

* **Customer database with order information**

*User can view/search customers, where order information will be displayed (orders, products ordered, quantities, order date, shipped(true/false), delivery date).*

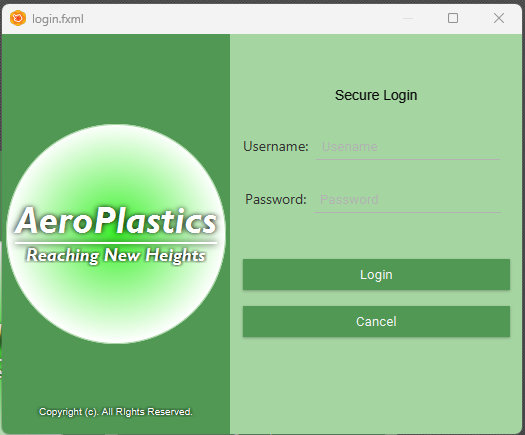
* **Create/Cancel Orders**

**Functionality**

* GUI needs to connect to a user database, where data can be pushed to the database to create store new users, as well as pull information from the database to check whether a user login is valid or invalid.
* GUI needs to pull information from inventory and raw material databases so the user can view product and raw material quantity.
* There needs to be a check for both product and raw material inventory, so if inventory level are low the user is notified.
* There needs to be functionality to order more product and raw materials.
* GUI needs to have connection to a customer database, where it will include their orders.
* User needs to be able to search customers, where they can view all the orders they have made and any pending orders.
* GUI needs to connect to a cart and order database. This will allow the user to search orders and view the customer that has made the specified order, view the shipping/delivery dates, and view product quantity.
* GUI needs to connect to a vender database to enable functionality of ordering raw material and keeping track of who the company has ordered from and the price of the material.

Application Windows

**Login Screen**

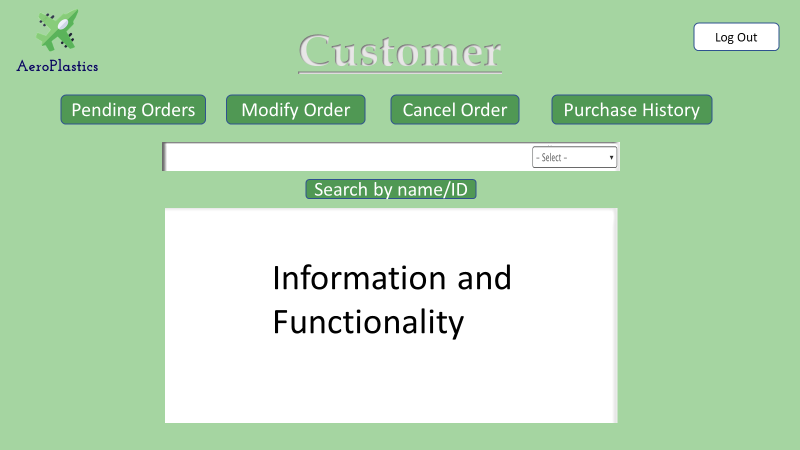


*\*Used for demo purposes. Will be replaced with logo.*

**Menu Screen** (Customers, Orders, Products, Order Supplies, Reports, Create new products)



**Customer Screen** – View order, Pending Orders, modify order, Cancel order, Purchase history.

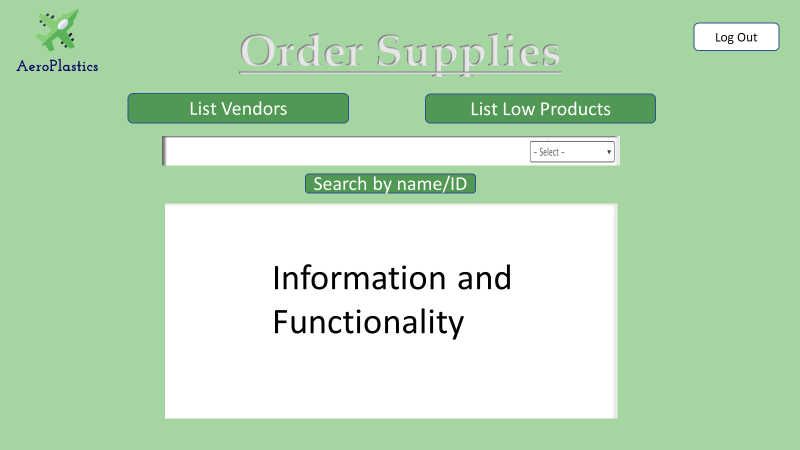


**Products Screen**- List products and attributes, Sort products by category,

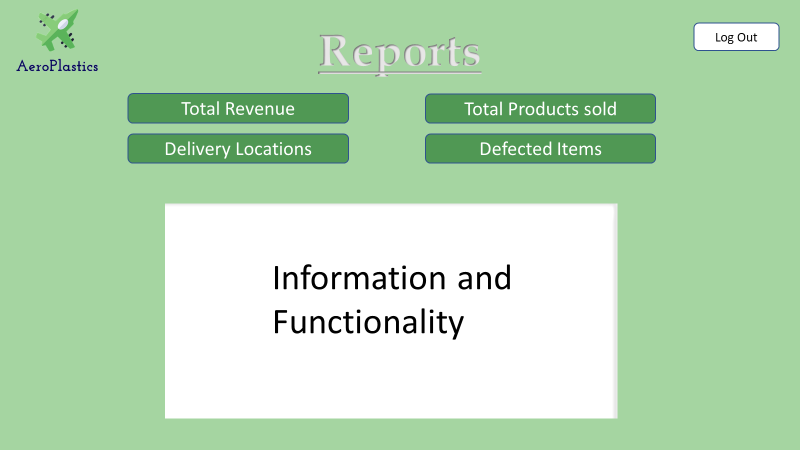


**Order Products Screen**- Inspect existing orders, pending orders, search by order id or name 

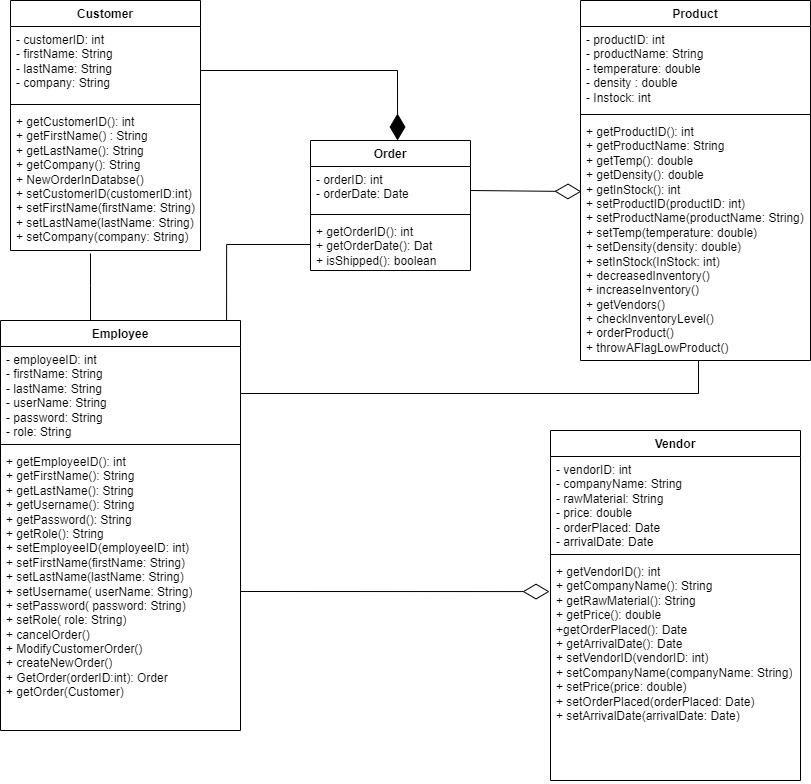
**Order Supplies** – Search Material, Products with low quantity, List Vendors and their materials



**Statistics/Reports** - total products sold, revenue from sales, delivery locations, number of defected products



UML Diagram



Use Case Diagram

Diagram

Description automatically generated