|  |  |
| --- | --- |
| Abstract  User  Administrator, Shopper | |
| Login  Logout  Register  Browse  Search  Name  Password  ID  Store | Store  Product |

|  |  |
| --- | --- |
| User  Administrator | |
| Add Product Req.  Modify Product Req.  Add Category Req.  List Categories | Store  Product |

|  |  |
| --- | --- |
| User  Shopper | |
| Add to cart  Remove from cart  View Cart  Check Out  Generate Invoice  View Invoices  Cart  Past Invoices | Store  Product  Invoice |

|  |  |
| --- | --- |
| Product | |
| Modify product  Image  ID  Description  Category  Available Quantity  Price | Category |

|  |  |
| --- | --- |
| Store | |
| Add user  Add product  Authenticate user  List Products  Modify Product  List Categories  Add Category  Modify Category  Authenticate Purchase  User List  Product List | Administrator  Shopper  Product  Category |

|  |  |
| --- | --- |
| Invoice | |
| Order ID  Order Timestamp  List of products  Quantity per product  Price per product | Product |

|  |  |
| --- | --- |
| Category | |
| ID Number  Name |  |

|  |  |
| --- | --- |
| DBManager | |
| Write to csv file | Store |

|  |  |
| --- | --- |
| GraphBuilder | |
| Calculate shortest distance to Distribution centres | Store |