**Product Management Application**

**ProductCount**

**BuyerOperations**

**ProductOperations**

**Product**

**CostlyProduct**

**Buyer**

**CheapProduct**

**Employee**

**Factory**

**EmployeeOperations**

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| **ProductOperations** |
| boolean insertProduct(Product a)  boolean removeProduct(Product a)  Product searchProduct(String productName)  void showAllProduct( ) |

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| **ProductCount** |
| boolean addProduct(int added)  boolean soldProduct(int solded) |

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| **Product** |
| String productName  Buyer buyer  int totalProduct |
| void setProductName(String productName)  void setBuyer(Buyer buyer)  void setTotalProduct (int totalProduct)  String getProductName ( )  Buyer getBuyer ( )  int getTotalProduct ( )  abstract void showDetails( ) |

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| **BuyerOperations** |
| boolean insertBuyer(Customer c)  boolean removeBuyer(Customer c)  Customer searchBuyer(int nid)  void showAllBuyer( ) |

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| **EmployeeOperations** |
| boolean insertEmployee(Employee e)  boolean removeEmployee(Employee e)  Employee searchEmployee(String empId)  void showAllEmployees( ) |

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| **Buyer** |
| int nid  String name  String phnNumber |
| void setNid(int nid)  void setName(String name)  void setPhnNumber(String phnNumber)  int getNid( )  String getName( )  String getPhnNumber( )  void showDetails( ) |

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| **CheapProduct** |
| int size |
| void setSize(int size)  int getSize( ) |

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| **CostlyProduct** |
| int price |
| void setPrice (int price)  int getPrice ( ) |

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| **Factory** |
| String name  String factoryName  Product products[ ]  Buyer buyers[ ]  Employee employees[ ] |
| void setName(String name)  void setFactoryName(String factoryName)  String getName( )  String getFactoryName ( )  void showDetails( ) |

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| **Employee** |
| String empId  String empName  double salary |
| void setEmpId(String empId)  void setEmpName(String empName)  void setSalary(double salary)  String getEmpId( )  String getEmpName( )  double getSalary( )  void showDetails( ) |

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| **Start** |
| The Start class contains the main method. Inside the main method the application prompts the user to choose among the following options:  1. Employee Management  2. Buyer Management  3. Product Management  4. *Product Count*  5. Exit  Upon choosing any of the option the user is given some further options to choose from:  *Options for Employee Management:*   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | *Insert New Employee* |  | *Remove Employee* |  | *Search Employee* |  | *Show All Employees* |  | *Go Back* |   *Options for Buyer Management:*   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | *Insert New Buyer* |  | *Remove Buyer* |  | *Search Buyer* |  | *Show All Buyer* |  | *Go Back* |   *Options for Product Management:*   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | *Insert New Product* |  | *Remove Product* |  | *Search Product* |  | *Show All Product* |  | *Go Back* |   *Options for Product Count:*   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  | *Added Product* |  | *Solded Product* |  | *Show All Products* |  | *Go Back* |   The application will prompt the user to give input for the necessary values as per the option they choose. The application will repeatedly go on according to the user choices. |

**Project Requirements:**

* OOP1 Principles.
* Proper Logical Operations.
* Use of user defined Packages.
* File I/O.

**Banned Projects:**

* Bank Management Application
* Book Shop Management Application
* FoodCourt/Restaurant Management Application
* Market/Shop Management Application.