Task 1:

a) Class Order:

Attributes are :

- OrderId
- dateOrdered
- toolName
- amountOrdered
- supplierName

Methods is/are:

- toString() to represent the order generated

b) Class Supplier:

Attributes are :

- id
- name
- address
- contactPerson

Methods is/are:

- toString() to represent the supplier information

c) Class Tool:

Attributes are :

- id
- name
- quantity
- price
- supplierId

Methods is/are:
- toString() to represent the tool information
- getId() – getter for tool ID
- getName() – getter for tool name
- getQuantity() – getter for quantity in stock
- getSupplierId() – getter for supplier Id

d) Class InventoryManager

Attributes are :

- Inventory – list of tool inventory
- Suppliers – List of supplier information

  Methods is/are:
- loadInventoryFromFile(String filename) : uses scanner to read information from items.txt and adds to inventory list
- loadSuppliersFromFile(String filename) : uses scanner to read information from suppliers.txt and adds to suppliers list
- saveInventoryToFile (String filename): uses PrintWriter to write to items.txt if any changes has been made to the inventory (deleted tool or new tool added)
- generateAndSaveOrders(int threshold): generates new orders if any of the quantities in stock goes below the threshold.
- generateRandomOrderId(): generates random 5 digit order number
- saveOrdersToFile(String filename, List<Order> orders): saves the orders generated to orders.txt file
- addTool(Tool tool) : adds a new tool object to the inventory
- deleteTool(int toolId): deletes tool from inventory
- findToolById(int toolId): finds tool by Id
- findSupplierById(int supplierId) : gets the supplier information
- getInventory(): getter for inventory list
- getSuppliers(): getter for supplier information

Class Order

+ orderId: int
+ dateOrdered: Date
+ toolName: String
+ amountOrdered: int
+ supplierName: String

+ toString(): String

Class Supplier

+ id: int
+ name: String
+ address: String
+ contactPerson: String

+ toString(): String

owns

owns

Class Tool

- id: int
- name: String
- quantity: int
- price: double
- supplierId: int

+ toString() : String
+ getId(): int
+ getName(): String
+ getQuantity(): int
+ getSupplierId: int

owns

Class InventoryManager

- inventory: List<Tool>
- suppliers: List<supplier>

1+ loadInventoryFromFile(fileName: String): void
+ loadSuppliersFromFile(fileName: String): void
+ saveInventoryToFile(fileName: String): void
+ generateAndSaveorders(threshold: int): void
- generateRandomOrderid(): int
- saveOrdersToFile(fileName: String, orders: List<Order>): void
+ addTool(tool: Tool): void
+ deleteTool(toolId: int): void
+ findToolByidAndName(toolId: int, toolName: String): Tool
+ findSupplierById(supplierId: int): Supplier
+ getInventory(): List<Tool>
+ getSuppliers(): List<Supplier>