

**Main Window**

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-tableWidget: QTableWidget
-nameEdit: QLineEdit
-typeCombo:QComboBox
-quantitySpin: QSpinBox
-locationEdit: QLineEdit
-dateEdit: QDateEdit
-searchEdit: QLineEdit
-addButton: QPushButton
-updateButton: QPushButton
-deleteButton: QPushButton
-searchButton: QPushButton
-reportButton: QPushButton
-statusLabel: QLabel
-dbManager: DatabaseManager
-inventoryManager: InventoryManager
-selectedId: int

+MainWindow(QWidget* parent = nullptr)
+~MainWindow()
+setupUI() : void
+loadComponents() : void
+clearForm(): void
+populateForm(Component &) : void
+getFormData() : Component
+addComponent() : void
+updateComponent() : void
+deleteComponent() : void
+searchComponents() : void
+onTableSelectionChanged() : void
+generateReport() : void
+checkLowStock() : void

```

