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| **Use Case Name** | Customer Creation |
| **Use Case ID** | UC-001 |
| **Actor** | Sales Representative |
| **Pre-Condition** | The Sales Representative is logged into the ERPNext system. |
| **Post-Condition** | Customer details are saved and submitted in the system. |
| **Basic Flow** | 1. Sales Representative navigates to CRM > Customer > New.    * **System Response:** Displays the Customer creation form. 2. Sales Representative enters customer name.    * **System Response:** Validates the name. 3. Sales Representative enters contact details (phone, email).    * **System Response:** Validates the contact details. 4. Sales Representative enters the address (street, city, state, zip code).    * **System Response:** Validates the address. 5. Sales Representative clicks "Save."    * **System Response:** Saves the customer details but does not submit them. 6. Sales Representative clicks "Submit."    * **System Response:** Submits the customer details, finalizing the creation process. |
| **Alternate Flow** | * If the entered information is invalid at any step (Step 2, 3, or 4), the system displays an error message with details on what needs to be corrected. * Sales Representative corrects the invalid information and proceeds with the next steps. |

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| **Use Case Name** | Sales Order Creation |
| **Use Case ID** | UC-002 |
| **Actor** | Sales Representative |
| **Pre-Condition** | The Sales Representative is logged into the ERPNext system. |
| **Post-Condition** | Sales order is created and submitted in the system. |
| **Basic Flow** | 1. Sales Representative navigates to Selling > Sales Order > New.    * **System Response:** Displays the Sales Order creation form. 2. Sales Representative selects the customer from a dropdown list.    * **System Response:** Populates customer details in the form. 3. Sales Representative enters the order date.    * **System Response**: Validates the date format. 4. Sales Representative adds items by clicking "Add Row."    * **System Response:** Displays fields for product, quantity, and price. 5. Sales Representative selects the product from a list.    * **System Response:** Displays product details. 6. Sales Representative enters the quantity and price.    * **System Response:** Calculates the total price for the item. 7. Sales Representative repeats steps 4-6 for all items in the order.    * **System Response:** Updates the total order amount. 8. Sales Representative clicks "Save."    * **System Response:** Saves the sales order but does not submit it. 9. Sales Representative clicks "Submit."    * **System Response:** Submits the sales order, finalizing the creation process. |
| **Alternate Flow** | * If any information is invalid (Step 3, 6, or 7), the system displays an error message with details on what needs to be corrected. * Sales Representative corrects the invalid information and proceeds with the next steps. |

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| **Use Case Name** | Material Availability Check |
| **Use Case ID** | UC-003 |
| **Actor** | Inventory Manager |
| **Pre-Condition** | The Inventory Manager is logged into the ERPNext system. |
| **Post-Condition** | Material availability is checked in the system. |
| **Basic Flow** | 1. Inventory Manager navigates to Stock > Stock Ledger.    * **System Response:** Displays the stock ledger with current stock levels. 2. Inventory Manager searches for specific materials by entering their names or codes.    * **System Response:** Filters and displays the stock levels of the specified materials. 3. Inventory Manager reviews the stock levels to ensure sufficient quantities are available.    * **System Response:** Highlights any materials with low stock levels. 4. If necessary, Inventory Manager clicks on a material to view detailed information (e.g., location, batch number).    * **System Response:** Displays detailed information for the selected material. |
| **Alternate Flow** | * If stock levels are insufficient (Step 3), the Inventory Manager can create a purchase order for additional materials by navigating to Buying > Purchase Order > New and following the steps in UC007. |

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| **Use Case Name** | BOM Creation and Material Calculation |
| **Use Case ID** | UC-004 |
| **Actor** | Production Planner |
| **Pre-Condition** | The Production Planner is logged into the ERPNext system. |
| **Post-Condition** | BOM is created and submitted in the system. |
| **Basic Flow** | 1. Production Planner navigates to Manufacturing > Bill of Materials > New.    * **System Response:** Displays the BOM creation form. 2. Production Planner enters the BOM name and selects the product.    * **System Response:** Displays fields for entering item details. 3. Production Planner clicks "Add Row" to add items to the BOM.    * **System Response:** Displays fields for item code, quantity, and unit of measure. 4. Production Planner enters item code, quantity, and unit of measure.    * **System Response:** Validates the entered information. 5. Production Planner repeats steps 3-4 for all items in the BOM.    * **System Response:** Calculates the total material requirements for the BOM. 6. Production Planner clicks "Save."    * **System Response:** Saves the BOM but does not submit it. 7. Production Planner clicks "Submit."    * **System Response:** Submits the BOM, finalizing the creation process. |
| **Alternate Flow** | * If the entered information is invalid at any step (Step 2, 4, or 5), the system displays an error message with details on what needs to be corrected. * Production Planner corrects the invalid information and proceeds with the next steps. |

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| **Use Case Name** | Cost Calculation and Recording |
| **Use Case ID** | UC-005 |
| **Actor** | Accountant |
| **Pre-Condition** | The Accountant is logged into the ERPNext system. |
| **Post-Condition** | Costs are recorded in the system. |
| **Basic Flow** | 1. Accountant navigates to Accounting > Cost Centers.    * **System Response:** Displays the cost center management screen. 2. Accountant selects the relevant cost center.    * **System Response:** Displays the details of the selected cost center. 3. Accountant clicks "Add Row" to add cost details.    * **System Response:** Displays fields for entering cost description, amount, and date. 4. Accountant enters the cost description, amount, and date.    * **System Response:** Validates the entered information. 5. Accountant clicks "Save."    * **System Response:** Saves the cost details in the system. |
| **Alternate Flow** | * If the entered information is invalid (Step 4), the system displays an error message with details on what needs to be corrected. * Accountant corrects the invalid information and proceeds with the next steps. |

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| **Use Case Name** | Vendor Creation |
| **Use Case ID** | UC-006 |
| **Actor** | Procurement Officer |
| **Pre-Condition** | The Procurement Officer is logged into the ERPNext system. |
| **Post-Condition** | Vendor details are saved and submitted in the system. |
| **Basic Flow** | 1. Procurement Officer navigates to Buying > Supplier > New.    * **System Response:** Displays the Supplier creation form. 2. Procurement Officer enters supplier name.    * **System Response:** Validates the name. 3. Procurement Officer enters contact details (phone, email).    * **System Response:** Validates the contact details. 4. Procurement Officer enters the address (street, city, state, zip code).    * **System Response:** Validates the address. 5. Procurement Officer clicks "Save."    * **System Response:** Saves the supplier details but does not submit them. 6. Procurement Officer clicks "Submit."    * **System Response:** Submits the supplier details, finalizing the creation process. |
| **Alternate Flow** | * If the entered information is invalid at any step (Step 2, 3, or 4), the system displays an error message with details on what needs to be corrected. * Procurement Officer corrects the invalid information and proceeds with the next steps. |

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| **Use Case Name** | Purchase Order Creation/Raw Material Procurement |
| **Use Case ID** | UC-007 |
| **Actor** | Procurement Officer |
| **Pre-Condition** | The Procurement Officer is logged into the ERPNext system. |
| **Post-Condition** | Purchase order is created and submitted in the system. |
| **Basic Flow** | 1. Procurement Officer navigates to Buying > Purchase Order > New.    * **System Response:** Displays the Purchase Order creation form. 2. Procurement Officer selects the supplier from a dropdown list.    * **System Response:** Populates supplier details in the form. 3. Procurement Officer enters the order date.    * **System Response:** Validates the date format. 4. Procurement Officer clicks "Add Row" to add items.    * **System Response:** Displays fields for product, quantity, and price. 5. Procurement Officer selects the product from a list.    * **System Response:** Displays product details. 6. Procurement Officer enters the quantity and price.    * **System Response:** Calculates the total price for the item. 7. Procurement Officer repeats steps 4-6 for all items in the order.    * **System Response:** Updates the total order amount. 8. Procurement Officer clicks "Save."    * **System Response:** Saves the purchase order but does not submit it. 9. Procurement Officer clicks "Submit."    * **System Response:** Submits the purchase order, finalizing the creation process. |
| **Alternate Flow** | * If any information is invalid (Step 3, 6, or 7), the system displays an error message with details on what needs to be corrected. * Procurement Officer corrects the invalid information and proceeds with the next steps. |

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| **Use Case Name** | Manage Subcontracting Process |
| **Use Case ID** | UC-008 |
| **Actor** | Procurement Manager |
| **Pre-Condition** | 1. Subcontractor is set up as a supplier in the system.  2. Bill of Materials (BOM) for the finished goods is created and available.  3. Raw materials are available in the inventory. |
| **Post-Condition** | 1. Finished goods are received and recorded in the inventory.  2. Payment transaction is recorded.  3. Optional quality inspection is completed. |
| **Basic Flow** | 1. Create Purchase Order (PO):   * Actor: Procurement Manager * Action: Issues a PO to the subcontractor specifying the finished goods. * System Response: Saves the PO and updates the order status to "Pending".   2. Transfer Raw Materials:   * Actor: Procurement Manager * Action: Initiates a Stock Entry to transfer raw materials to the subcontractor. * System Response: Updates inventory levels and records the transfer.   3. Receive Finished Goods:   * Actor: Procurement Manager * Action: Creates a Purchase Receipt when the finished goods are received. * System Response: Updates inventory with the received goods and marks the PO as "Received".   4. Generate Purchase Invoice:   * Actor: Procurement Manager * Action: Issues a Purchase Invoice based on the Purchase Receipt. * System Response: Records the financial transaction and updates accounts payable.   5. Quality Inspection (Optional):   * Actor: Quality Inspector * Action: Conducts a quality check on the received goods. * System Response: Updates the inspection status and records any defects or issues. |
| **Alternate Flow** | Step 2a (Basic Flow Step 3): If the received quantity of finished goods is less than the specified quantity:   * Actor: Procurement Manager * Action: Edits the received quantity in the Purchase Receipt. * System Response: Updates the inventory and adjusts the remaining quantity to be received.   Step 2b (Basic Flow Step 3): If the received goods fail the quality inspection:   * Actor: Quality Inspector * Action: Marks the goods as "Rejected" and notifies the Procurement Manager. * System Response: Flags the Purchase Receipt for review and possible return of goods to the subcontractor.   Step 2c (Basic Flow Step 4): If payment terms require partial payment before receiving goods:   * Actor: Procurement Manager * Action: Issues an advance payment request. * System Response: Generates an advance payment record and updates accounts payable. |

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| **Use Case Name** | Subcontractor Management |
| **Use Case ID** | UC-009 |
| **Actor** | Production Manager |
| **Pre-Condition** | The Production Manager is logged into the ERPNext system. |
| **Post-Condition** | Not directly supported in ERPNext. |
| **Basic Flow** | Not Supported |
| **Alternate Flow** | Post-condition: Not directly supported in ERPNext. |

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| **Use Case Name** | Packaging Requirements |
| **Use Case ID** | UC-0010 |
| **Actor** | Sales Representative |
| **Pre-Condition** | The Sales Representative is logged into the ERPNext system. |
| **Post-Condition** | Not directly supported in ERPNext. |
| **Basic Flow** | Not Supported |
| **Alternate Flow** | Post-condition: Not directly supported in ERPNext. |

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| **Use Case Name** | Inventory Management |
| **Use Case ID** | UC-0011 |
| **Actor** | Inventory Manager |
| **Pre-Condition** | The Inventory Manager is logged into the ERPNext system. |
| **Post-Condition** | Stock levels are updated in the system. |
| **Basic Flow** | 1. Inventory Manager navigates to Stock > Stock Entry > New.    * **System Response:** Displays the Stock Entry form. 2. Inventory Manager selects the type of stock entry (e.g., Material Receipt, Material Issue).    * **System Response:** Displays fields based on the selected stock entry type. 3. Inventory Manager clicks "Add Row" to add items.    * **System Response:** Displays fields for item code, quantity, and unit of measure. 4. Inventory Manager enters item code, quantity, and unit of measure.    * **System Response:** Validates the entered information. 5. Inventory Manager repeats steps 3-4 for all items in the stock entry.    * **System Response:** Updates the total quantities. 6. Inventory Manager clicks "Save."    * **System Response:** Saves the stock entry but does not submit it. 7. Inventory Manager clicks "Submit."    * **System Response:** Submits the stock entry, updating stock levels in the system. |
| **Alternate Flow** | * If any information is invalid (Step 4), the system displays an error message with details on what needs to be corrected. * Inventory Manager corrects the invalid information and proceeds with the next steps. |