**Shop Management System**

**Introduction:**

The **Shop Management System** project aims to develop a retail management system using Windows Forms technology, with DevExpress tools utilized to provide an advanced and seamless user experience. The system includes a set of core entities for managing customers, categories, products, orders, and invoices.

**Main Modules in the Project:**

1. **Customer:**
   * **Functions:** Add, update, and delete customers.
   * **Description:** This part of the system allows managing customer data such as first name, last name, email, and phone number.
2. **Category:**
   * **Functions:** Add, update, and delete categories.
   * **Description:** Products are organized into categories to facilitate easy browsing and management.
3. **Product:**
   * **Functions:** Add, update, and delete products.
   * **Description:** This includes managing product details such as name, associated category, and price.
4. **Order:**
   * **Functions:** Add, update, and delete orders.
   * **Description:**
     + **Add Order:** When the "Add" button is clicked, an order is created, and a form opens to enter the order details.
     + **Order Details Entry:** The user can add multiple order details by clicking the "Add" button for each product. Once all details are entered, clicking "Done" will automatically generate and add the invoice to the system.
     + **Update Order:** The user can update the order details such as the customer or order date, but this does not affect the associated order details or invoice.
     + **Delete Order:** When an order is deleted, all associated order details and the corresponding invoice are also removed.
5. **Order Details:**
   * **Functions:** View and delete order details.
   * **Description:** Includes details of the products within each order, such as quantity and price per product.
6. **Invoice:**
   * **Functions:** View and delete invoices.
   * **Description:** The invoice is automatically generated based on the order details and includes the total amount and relevant order information. Deleting an order will also delete the associated invoice.

**Visual Elements:**

1. **TreeList for Products:**
   * **Description:** Displays products under each category using a TreeList. This view facilitates navigation between categories and viewing the associated products.
2. **TreeList for Orders and Their Details:**
   * **Description:** Displays order details and the invoices linked to each order using a TreeList. This structured view helps track the details of each order.

**Workflow:**

1. **Adding an Order:**
   * The user starts by creating a new order through the "Add Order" button.
   * After creating the order, a form opens to enter the required product details.
   * The user can continue adding multiple order details. Once all details are entered, clicking "Done" will automatically calculate and add the invoice to the system.
2. **Updating/Deleting Orders and Details:**
   * The user can update existing orders (e.g., changing the customer or order date) without affecting the associated order details or invoice.
   * The user can also update or delete the product details linked to the orders. Deleting an order will remove all related order details and the corresponding invoice.
3. **Viewing and Deleting Invoices:**
   * The user can view invoices generated from the orders and delete them if necessary.

**Conclusion:**

The **Shop Management System** project is a comprehensive tool for managing retail operations, providing all the necessary functions for handling customers, categories, products, orders, and invoices in an organized and efficient manner.