|  |
| --- |
| Class User |
| +user\_ID: int  - password: String  + name, email: String |
| + register(): void + login(): boolean + logout(): void + updateProfile(): void |

|  |
| --- |
| Class Admin |
| - adminID  + permissions |
| + addProduct():void + updateProduct():void  + deleteProduct():void + viewReports():void |

|  |  |  |
| --- | --- | --- |
| Class product | Class ShoppingCart | Class Order |
| +product\_id: int  +name:String  +description:String  +price :float  +stock:int | +cartID:int  +products :list  +totalAmount:float | +orderID: int  +userID: int  +cartID: int  +orderDate: String |
| + getDetails():product + updateStock(): void + calculateDiscount(): float | + addToCart(): void + removeFromCart(): void + calculateTotal(): float | + placeOrder(): boolean + cancelOrder(): void + getOrderDetails(): string |

|  |
| --- |
| Class Payment |
| +paymentID:int  +orderID:int  +amount:float  +paymentMethod:String |
| + processPayment(): void + refundPayment(): void + verifyPayment(): boolean |

Relationships:

* A User can have one Shopping Cart.
* A Shopping Cart contains many Products.
* A User can place multiple Orders.
* Each Order is linked to a single Payment.
* An Admin manages the Products.