Entity Relationship Diagram

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| **Entity** | **Attributes** | **Relationships** |
| Buyer | - BuyerID: INT - Name: STRING - ContactInfo: STRING | - Makes Transaction (One-to-Many) - Writes Review (One-to-Many) - Authors NetworkingPost (One-to-Many) |
| Supplier | - SupplierID: INT - BusinessName: STRING - ContactInfo: STRING - ProductCategories: STRING - SustainabilityStatus: STRING | - Provides Product (One-to-Many) - Receives Review (One-to-Many) - Generates Analytics (One-to-One) - Has Sustainability Certification (One-to-Many) - Authors NetworkingPost (One-to-Many) |
| SystemAdmin | - AdminID: INT - Name: STRING - Role: STRING | - Manages Supplier (One-to-Many) |
| Product | - ProductID: INT - ProductName: STRING - Description: STRING - Price: DECIMAL - Category: STRING - SupplierID: INT | - Belongs to Supplier (Many-to-One) - Included in Transaction (One-to-Many) |
| Transaction | - TransactionID: INT - BuyerID: INT - SupplierID: INT - ProductID: INT - TransactionDate: DATETIME - TotalAmount: DECIMAL | - Linked to Payment (One-to-One) - Made by Buyer (Many-to-One) - Involves Product (One-to-Many) |
| Payment | - PaymentID: INT - TransactionID: INT - PaymentDate: DATETIME - Amount: DECIMAL - PaymentMethod: STRING | - Linked to Transaction (One-to-One) |
| Review | - ReviewID: INT - AuthorID: INT - TargetID: INT - Rating: INT - Comment: TEXT - DateCreated: DATETIME | - Written by Buyer (Many-to-One) - Targets Supplier (Many-to-One) |
| Analytics | - AnalyticsID: INT - SupplierID: INT - SalesData: TEXT - Trends: TEXT - CustomerDemographics: TEXT | |  | | --- | | - Generated for Supplier (One-to-One) |  |  | | --- | |  | |
| Sustainability | - CertificationID: INT - SupplierID: INT - CertificationLevel: STRING - EcoPractices: TEXT | - Belongs to Supplier (Many-to-One) |
| NetworkingPost | - PostID: INT - AuthorID: INT - Title: STRING - Content: TEXT - CreatedDate: DATETIME - PostType: STRING | - Authored by Buyer or Supplier (Many-to-One) |