**Database Systems Lab**

**(CL2005)**

**Final Project Report**

**Bank Management System**

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**Table**

|  |
| --- |
| **Table** |
| **Name** |
| Accounts |
| Admins |
| Bills |
| Cards |
| Complaints |
| Heirs |
| Loans |
| SignUp |
| Transactions |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Column(s) of "Accounts" Table** | | | | |
| **Name** | **Datatype** | **Is PK** | **Is FK** | **Null Option** |
| User ID | INTEGER | Yes | No | NOT NULL |
| Full Name | VARCHAR(255) | No | No | NOT NULL |
| CNIC | CHAR(13) | No | No | NOT NULL |
| User Name | VARCHAR(50) | No | No | NOT NULL |
| Password | VARCHAR(255) | No | No | NOT NULL |
| Account Type | VARCHAR(50) | No | No | NOT NULL |
| Balance | DECIMAL(10,2) | No | No | NULL |
| Heirs | INTEGER | No | No | NULL |
| Account Status | BINARY | No | No | NOT NULL |

|  |  |
| --- | --- |
| **Child Relationship(s) of "Accounts" Table** | |
| **FK Name** | **Cardinality** |
| R/2 | One-to-Zero-One-or-More |
| R/4 | One-to-Zero-One-or-More |
| R/5 | Zero-or-One-to-Zero-One-or-More |
| R/7 | One-to-Zero-One-or-More |
| R/9 | One-to-Zero-One-or-More |
| R/11 | One-to-Zero-One-or-More |
| R/14 | One-to-Zero-One-or-More |
| R/15 | One-to-Zero-One-or-More |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Column(s) of "Admins" Table** | | | | |
| **Name** | **Datatype** | **Is PK** | **Is FK** | **Null Option** |
| Full Name | VARCHAR(255) | No | No | NOT NULL |
| CNIC | CHAR(13) | No | No | NOT NULL |
| User Name | VARCHAR(50) | No | No | NOT NULL |
| Password | VARCHAR(255) | No | No | NOT NULL |
| User ID | INTEGER | Yes | No | NOT NULL |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Column(s) of "Bills" Table** | | | | |
| **Name** | **Datatype** | **Is PK** | **Is FK** | **Null Option** |
| Transaction Amount | DECIMAL(10,2) | No | No | NOT NULL |
| Date | DATE | No | No | NOT NULL |
| Receiver ID | INTEGER | No | Yes | NOT NULL |
| User ID | INTEGER | No | Yes | NOT NULL |
| Bill ID | INTEGER | Yes | No | NOT NULL |

|  |  |
| --- | --- |
| **Parent Relationship(s) of "Bills" Table** | |
| **Cardinality** | **FK Name** |
| One-to-Zero-One-or-More | R/14 |
| One-to-Zero-One-or-More | R/15 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Column(s) of "Cards" Table** | | | | |
| **Name** | **Datatype** | **Is PK** | **Is FK** | **Null Option** |
| User ID | INTEGER | No | Yes | NOT NULL |
| Card Type | VARCHAR(50) | No | No | NOT NULL |
| Limit | DECIMAL(10,2) | No | No | NOT NULL |
| Card ID | INTEGER | Yes | No | NOT NULL |

|  |  |
| --- | --- |
| **Parent Relationship(s) of "Cards" Table** | |
| **Cardinality** | **FK Name** |

|  |  |
| --- | --- |
| One-to-Zero-One-or-More | R/7 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Column(s) of "Complaints" Table** | | | | |
| **Name** | **Datatype** | **Is PK** | **Is FK** | **Null Option** |
| User ID | INTEGER | No | Yes | NOT NULL |
| Complaint | TEXT | No | No | NOT NULL |
| Complaint ID | INTEGER | Yes | No | NOT NULL |

|  |  |
| --- | --- |
| **Parent Relationship(s) of "Complaints" Table** | |
| **Cardinality** | **FK Name** |
| One-to-Zero-One-or-More | R/2 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Column(s) of "Heirs" Table** | | | | |
| **Name** | **Datatype** | **Is PK** | **Is FK** | **Null Option** |
| User ID | INTEGER | Yes | Yes | NOT NULL |
| Heir Name | VARCHAR(255) | No | No | NOT NULL |
| Heir CNIC | CHAR(13) | No | No | NOT NULL |
| Relation | VARCHAR(50) | Yes | No | NOT NULL |

|  |  |
| --- | --- |
| **Parent Relationship(s) of "Heirs" Table** | |
| **Cardinality** | **FK Name** |
| One-to-Zero-One-or-More | R/4 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Column(s) of "Loans" Table** | | | | |
| **Name** | **Datatype** | **Is PK** | **Is FK** | **Null Option** |
| User ID | INTEGER | No | Yes | NOT NULL |
| Amount Requested | DECIMAL(10,2) | No | No | NOT NULL |
| Date | DATE | No | No | NOT NULL |
| Loan ID | INTEGER | Yes | No | NOT NULL |

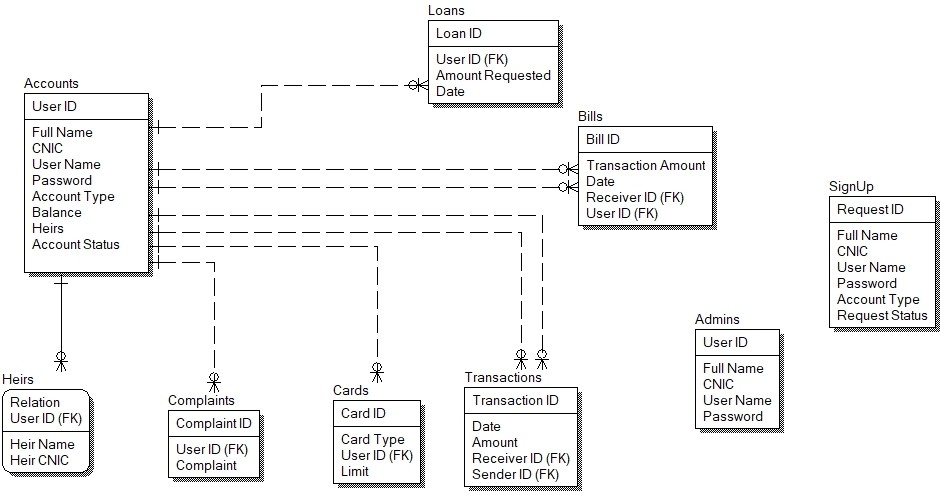
|  |  |
| --- | --- |
| **Parent Relationship(s) of "Loans" Table** | |
| **Cardinality** | **FK Name** |
| Zero-or-One-to-Zero-One-or-More | R/5 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Column(s) of "SignUp" Table** | | | | |
| **Name** | **Datatype** | **Is PK** | **Is FK** | **Null Option** |
| Full Name | VARCHAR(255) | No | No | NOT NULL |
| CNIC | CHAR(13) | No | No | NOT NULL |
| User Name | VARCHAR(50) | No | No | NOT NULL |
| Password | VARCHAR(255) | No | No | NOT NULL |
| Account Type | VARCHAR(50) | No | No | NOT NULL |
| Request Status | BINARY | No | No | NOT NULL |
| Request ID | INTEGER | Yes | No | NOT NULL |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Column(s) of "Transactions" Table** | | | | |
| **Name** | **Datatype** | **Is PK** | **Is FK** | **Null Option** |
| Date | DATETIME DAY TO SECOND | No | No | NOT NULL |
| Amount | DECIMAL(10,2) | No | No | NOT NULL |
| Receiver ID | INTEGER | No | Yes | NOT NULL |
| Sender ID | INTEGER | No | Yes | NOT NULL |
| Transaction ID | INTEGER | Yes | No | NOT NULL |

|  |  |
| --- | --- |
| **Parent Relationship(s) of "Transactions" Table** | |
| **Cardinality** | **FK Name** |
| One-to-Zero-One-or-More | R/9 |
| One-to-Zero-One-or-More | R/11 |

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