**SQL Delete Data Structure**

**1. Table Class**

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| --- | --- | --- |
| **Instance Variable** | **Data Type** | **Use** |
| Name | String | Table Name |

**2. Column Class**

|  |  |  |
| --- | --- | --- |
| **Instance Variable** | **Data Type** | **Use** |
| Name | String | Column Name |
| Type | Integer | Column Database Type |
| Name In Query | String | Name Considered in Query |

| **Method** | **Parameters/Return** | **Use** |
| --- | --- | --- |
| equal | Query: Query  Return Restriction | Give Restriction with current Column and Query and = criteria |
| equal | Column: Column  Return Restriction | Give Restriction with current Column and Parameter Column and = criteria |
| equal | Value: Object  Return Restriction | Give Restriction with current Column and Parameter Value and = criteria |
| notEqual | Query: Query  Return Restriction | Give Restriction with current Column and Parameter Query and <> criteria |
| notEqual | Column: Column  Return Restriction | Give Restriction with current Column and Parameter Column and <> criteria |
| notEqual | Value: Object  Return Restriction | Give Restriction with current Column and Parameter Value and <> criteria |
| greater | Query: Query  Return Restriction | Give Restriction with current Column and Parameter Query and > criteria |
| greater | Column: Column  Return Restriction | Give Restriction with current Column and Parameter Column and > criteria |
| greater | Value: Object  Return Restriction | Give Restriction with current Column and Parameter Value and > criteria |
| greaterEqual | Query: Query  Return Restriction | Give Restriction with current Column and Parameter Query and >= criteria |
| greaterEqual | Column: Column  Return Restriction | Give Restriction with current Column and Parameter Column and >= criteria |
| greaterEqual | Value: Object  Return Restriction | Give Restriction with current Column and Parameter Value and >= criteria |
| less | Query: Query  Return Restriction | Give Restriction with current Column and Parameter Query and < criteria |
| less | Column: Column  Return Restriction | Give Restriction with current Column and Parameter Column and < criteria |
| less | Value: Object  Return Restriction | Give Restriction with current Column and Parameter Value and < criteria |
| lessEqual | Query: Query  Return Restriction | Give Restriction with current Column and Parameter Query and <= criteria |
| lessEqual | Column: Column  Return Restriction | Give Restriction with current Column and Parameter Column and <= criteria |
| lessEqual | Value: Object  Return Restriction | Give Restriction with current Column and Parameter Value and <= criteria |
| between | Value: Object/Column  To: Object/Column  Return Restriction | Give Restriction with current Column and Parameter Two Values and between criteria |
| isNull | Return Restriction | Give Restriction with is null criteria |
| isNotNull | Return Restriction | Give Restriction with is not null criteria |
| in | Values: Variable Objects  Return Restriction | Give Restriction with Parameter values and in criteria |
| notIn | Values: Variable Objects  Return Restriction | Give Restriction with Parameter values and not in criteria |
| in | Query: Query  Return Restriction | Give Restriction with Parameter Query and in criteria |
| notIn | Query: Query  Return Restriction | Give Restriction with Parameter Query and not in criteria |

**3. Restriction Class**

|  |  |  |
| --- | --- | --- |
| **Instance Variable** | **Data Type** | **Use** |
| Operator | Operator | AND/OR |
| Column | Column | Column in Restriction |
| Criteria | Criteria Enum | =/<>/>/>=/</<=/between/in/not in/is null/is not null/exists/not exists |
| Value | Object | =/<>/>/>=/</<=/between Value |
| Values | Array of Object | In/not In values |
| To | Object | Between To value |
| Restrictions | List<Restriction> | Sibling Restrictions in same level |

| **Method** | **Parameters/Return** | **Use** |
| --- | --- | --- |
| and | Restriction: Restriction | Add Restriction into Sibling Restrictions with AND operator |
| or | Restriction: Restriction | Add Restriction into Sibling Restrictions with OR operator |

**4. Query Class**

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| --- | --- | --- |
| **Instance Variable** | **Data Type** | **Use** |
| Table | Table | Table in delete from clause |
| Restrictions | List<Restriction> | List of restriction in where clause |

| **Method** | **Parameters/Return** | **Use** |
| --- | --- | --- |
| deleteFrom | Table: Table | Save Delete Table |
| exists | Query: Query  Return Restriction | Give Restriction with Parameter Query and exist criteria |
| notExists | Query: Query  Return Restriction | Give Restriction with Parameter Query and not exist criteria |
| where | Restriction | Add Restriction into Restrictions with AND operator |
| and | Restriction | Add Restriction into Restrictions with AND operator |
| or | Restriction | Add Restriction into Restrictions with OR operator |
| executeDelete | Return count: int | Execute Delete Query and return number of deleted records |