# Class Record

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| --- | --- | --- | --- |
| Property | Input | output | description |
| Record() |  | Record type | Blank initializer for a record |
| Record(int) | An integer specifying number of entries | Record type | An initializer that creates an arbitrary number of entries |
| string accessRecord(int); | An integer that specifies an index to access | Returns the string value accessed | Returns the part of the record that was accessed\* |
| int modifyRecord(int, string) | An integer that specifies index and a string to replace the value | Output will be nonzero if errors occur | Modifies a part of a record\* |

\* part refers to a specific string in a vector of strings controlled within private operations of the record class

# lass Attribute

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| --- | --- | --- | --- |
| Property | Input | output | description |
| string attributeName; | Na | Na | The public variable that contains the name of an attribute |
| string attributeType; | Na | Na | The public variable that contains the type of an attribute |

# Class Database

|  |  |  |  |
| --- | --- | --- | --- |
| Property | Input | output | description |
| Database (); |  | Database | Initializes a database |
| int addTable (Table, string); | A table object and a table name (string) | Output will be nonzero if errors occur | Adds a table to database |
| int dropTable (string); | The (string) name of a table to be dropped | Output will be nonzero if errors occur | Drops a table from database |
| vector<string> listTables (); |  | A vector of table names | Lists a database’s tables’ names |
| vector<Table> getTables (); |  | A vector of tables | Lists tables of a database |
| Table queryTable (vector<string>, string, string); | A vector of attributes that specify seect, a string that specifies from, and a string that specifies where | A rendered table | Renders a table based on query arguments |
| int deleteTable (vector<string>, string, string); | A vector of attributes that specify select, a string that specifies from, and a string that specifies where | Output will be nonzero if errors occur | Removes a table based on query arguments |

# Class Table

|  |  |  |  |
| --- | --- | --- | --- |
| Property | Input | output | description |
| string tableName; |  |  | Public variable corresponding to a table’s name |
| Table (); |  | A Table | Initializes the table |
| Table (vector<Attribute>); | A vector of attributes | A table | Initializes a table with preset attributes |
| int addAttribute (Attribute); | A single attribute | Output will be nonzero if errors occur | Adds an attribute to the end of a table |
| int delAttribute(string); | A single attribute | Output will be nonzero if errors occur | Deletes an attribute from the end of a table |
| int insertRecord(Record); | A single record | Output will be nonzero if errors occur | Inserts a record into the table |
| vector<Attribute> getAttributes (); |  | A vector of attributes | Gets the attributes of a table |
| int getSize (); |  | An integer representing size (# of elements) | Gets the size, or length, of a table |
| int renameAttribute (string, string); | A string of the attribute to change and the string value to change it to | Output will be nonzero if errors occur | Renames an attribute belonging to a table |
| static Table crossJoin (Table, Table); | Two tables to be joined together | A single table that results from the join operation | Joins two tables |
| float sumAttribute (string); | An attribute name | Float summation | Gets the sum of the records values in the attribute field |
| float countAttribute (string); | An attribute name | Float count (length) of non null (!=”NULL”) | Counts of the records values in the attribute field |
| float minAttribute (string); | An attribute name | Float minimum | Gets the minimum of the records values in the attribute field |
| float maxAttribute (string); | An attribute name | Float maximum | Gets the max of the records values in the attribute field |
| vector<Record>::iterator iterate; |  |  | Public variable that can be used to iterate over values |