API

**class Database**

Represents a Database that holds Tables.

Database()

Constructor function that creates an empty Database.

void addTable(Table, String)

Adds a Table to the Database with given name.

void deleteTable(String)

Deletes the Table with the given name from the Database.

vector<String>[] listTables()

Returns a vector of all the names of the Tables in the Database.

vector<Table>[] getTables()

Returns a vector of all the Tables in the Database.

Table query(string)

Returns a Table when given a command of the form:

SELECT <argument>

FROM <argument>

WHERE <argument>

The SELECT argument allows either a list of which attribute names to keep or the symbol “\*” to indicate to keep all attributes.

The FROM argument will be a single Table name.

The WHERE argument will consist of:

* + - Comparisons (=, !=, >, <, >=, <=) between attributes and values of the same type
    - AND, OR, and NOT
    - Parentheses

void deleteQuery(string)

Deletes tuples from a Table when given a command that follows the same structure as the query command.

**class Table**

Represents a Table that holds Records

Table()

Constructs a Table without any rows or columns.

Table(vector<AttributeTypeTuple>[])

Constructs a Table from given vector of attribute names and types.

void add(AttributeTypeTuple)

Adds a column to the end of the Table with the given attribute name and type.

void deleteATT(AttributeTypeTuple)

Deletes the attribute with the given name from the Table.

void addRecord(Record)

Inserts the given Record into the Table.

vector<AttributeTypeTuple>[] getAttributes()

Returns a vector of the attribute names and types.

int getSize()

Returns the number of Records in the Table.

void rename(String, String)

Changes the name of an attribute. The first parameter is the old name and the second name is the new name.

int sum(String)

Returns the sums of the values of the selected attribute in the Table.

int count(String)

Returns the count of non-null entries of the selected attribute in the Table.

int min(String)

Returns the minimum value of the selected attribute in the Table.

int max(String)

Returns the maximum value of the selected attribute in the Table.

**class AttributeTypeTuple**

Represents a tuple that holds a string and a Type.

AttributeTypeTuple(string, Type)

Constructs an AttributeTypeTuple with the values passed in.

string getAttribute()

Returns the string value.

Type getType()

Returns the Type value.