

QBE
~ _attributeName: string ~ _comparisonOperator: ComparisonOperator ~ _value: string
+ assert(string, boolean): boolean + QBE(string, ComparisonOperator, string) + toKVP(): KVP

FetchResultSet
~ _data: Array<KVP>
+ concat(FetchResultSet): void + FetchResultSet(JSONObject) + push(KVP): void + remove(number): void + size(): number + toKVP(DataStructureType): KVP

«enumeration» DataStructureType
HORIZONTAL = "Horizontal" VERTICAL = "Vertical"

«enumeration» AggregateOperator
SUM = "SUM" AVG = "AVG" COUNT = "COUNT"

«enumeration» ComparisonOperator
EQ = "==" LT = "<" LEQ = "<=" GEQ = ">=" GT = ">"

«enumeration» QueryAbleAttributeNamesKML
ID = "id" NAME = "name" VISIBILITY = "visibility" SIMPLEDATA_NAME = "simpledata_name" SIMPLEDATA_VALUE = "simpledata_value"

PostgreSQL
~ _idColName: string
+ aggregateByIds(Array<string>, AggregateOperator, string): Promise<number> + aggregateByIds(Array<string>, AggregateOperator): Promise<{kvp: KVP}> + deleteAttributeOfId(string, string): Promise<boolean> + deleteAttributesUsingQBE(QBE, Array<string>): Promise<boolean> + deleteObjectOfId(string): Promise<boolean> + deleteObjectsUsingQBE(QBE): Promise<boolean> + fetchAttributeNamesFromId(string): Promise<FetchResultSet> + fetchAttributeValuesFromId(string): Promise<FetchResultSet> + fetchIdsFromQBE(QBE, number): Promise<Set<string>> + fetchIdsFromQBEs(Array<QBE>, number): Promise<Set<string>> + insertAttributeOfId(string, string, any): Promise<boolean> + insertAttributesUsingQBE(QBE, KVP): Promise<boolean> + insertNewObject(JSONObject): Promise<boolean> + login(JSONObject): Promise<boolean> + logout(): Promise<boolean> + PostgreSQL(JSONObject) + updateAttributeValueOfId(string, string, any): Promise<boolean> + updateAttributeValuesUsingQBE(QBE, KVP): Promise<boolean>

GoogleSheets
~ _spreadsheetId: string ~ <u>apiUrlPrefix</u> : string
+ aggregateByIds(Array<string>, AggregateOperator, string): Promise<number> + aggregateByIds(Array<string>, AggregateOperator): Promise<{kvp: KVP}> + deleteAttributeOfId(string, string): Promise<boolean> + deleteAttributesUsingQBE(QBE, Array<string>): Promise<boolean> + deleteObjectOfId(string): Promise<boolean> + deleteObjectsUsingQBE(QBE): Promise<boolean> + fetchAttributeNamesFromId(string): Promise<FetchResultSet> + fetchAttributeValuesFromId(string): Promise<FetchResultSet> + fetchIdsFromQBE(QBE, number): Promise<Set<string>> + fetchIdsFromQBEs(Array<QBE>, number): Promise<Set<string>> + GoogleSheets(JSONObject) + insertAttributeOfId(string, string, any): Promise<boolean> + insertAttributesUsingQBE(QBE, KVP): Promise<boolean> + insertNewObject(JSONObject): Promise<boolean> + login(JSONObject): Promise<boolean> + logout(): Promise<boolean> + updateAttributeValueOfId(string, string, any): Promise<boolean> + updateAttributeValuesUsingQBE(QBE, KVP): Promise<boolean>

KML
+ aggregateByIds(Array<string>, AggregateOperator, string): Promise<number> + aggregateByIds(Array<string>, AggregateOperator): Promise<{kvp: KVP}> + fetchAttributeNamesFromId(string): Promise<FetchResultSet> + fetchAttributeValuesFromId(string): Promise<FetchResultSet> + fetchIdsFromQBE(QBE, number): Promise<Set<string>> + fetchIdsFromQBEs(Array<QBE>, number): Promise<Set<string>> + KML(JSONObject)

FirstNormalFormDataSource
# _dataStructureType: DataStructureType
+ FirstNormalFormDataSource(JSONObject): void

NonFirstNormalFormDataSource
+ NonFirstNormalFormDataSource(JSONObject)

«interface» SecuredDataSource
+ login(JSONObject): Promise<boolean> + logout(): Promise<boolean>

«interface» WritableDataSource
+ deleteAttributeOfId(string, string): Promise<boolean> + deleteAttributesUsingQBE(QBE, Array<string>): Promise<boolean> + deleteObjectOfId(string): Promise<boolean> + deleteObjectsUsingQBE(QBE): Promise<boolean> + insertAttributeOfId(string, string, any): Promise<boolean> + insertAttributesUsingQBE(QBE, KVP): Promise<boolean> + insertNewObject(JSONObject): Promise<boolean> + updateAttributeValueOfId(string, string, any): Promise<boolean> + updateAttributeValuesUsingQBE(QBE, KVP): Promise<boolean>

«interface» ReadableDataSource
+ aggregateByIds(Array<string>, AggregateOperator, string): Promise<number> + aggregateByIds(Array<string>, AggregateOperator): Promise<{kvp: KVP}> + fetchAttributeNamesFromId(string): Promise<FetchResultSet> + fetchAttributeValuesFromId(string): Promise<FetchResultSet> + fetchIdsFromQBE(QBE, number): Promise<Set<string>> + fetchIdsFromQBEs(Array<QBE>, number): Promise<Set<string>>

«interface» ProxyDataSource
+ proxyPrefix: string

UnitDataSource
# _provider: string # _uri: string
+ UnitDataSource(JSONObject)

DataSource
# _capabilities: DataSourceCapabilities # _dataSourceType: DataSourceType # _name: string
+ DataSource(JSONObject)

MashupDataSource
~ _mashup: Array<DataSource>
+ addDataSource(DataSource): void + aggregateByIds(Array<string>, AggregateOperator, string): Promise<number> + aggregateByIds(Array<string>, AggregateOperator): Promise<{kvp: KVP}> + fetchAttributeNamesFromId(string): Promise<FetchResultSet> + fetchAttributeValuesFromId(string): Promise<FetchResultSet> + fetchIdsFromQBE(QBE, number): Promise<Set<string>> + fetchIdsFromQBEs(Array<QBE>, number): Promise<Set<string>> + get(number): DataSource + MashupDataSource(JSONObject, Array<DataSource>) + removeDataSource(number): void + size(): number

«interface» DataSourceCapabilities
+ dbTransactionCapabilities: DBTransactionCapabilities + securityCapabilities: SecurityCapabilities + webCapabilities: WebCapabilities

«interface» WebCapabilities
+ restAPI: boolean

«interface» DBTransactionCapabilities
+ delete: boolean + insert: boolean + read: boolean + update: boolean

«interface» SecurityCapabilities
+ oauth: boolean