

## Discussion

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## SQL Statement Metadata

### InterSystems Queryable Statement Metadata

Dynamic SQL allows the user to dynamic create, populate and query tables, call procedures and functions, and so on - all without writing any ObjectScript. Of course, this capability is completely normal for xDBC clients. InterSystems Dynamic SQL has been available in Caché for several years and is available in all versions of InterSystems IRIS. What I am about to describe should work for all versions of InterSystems IRIS and for all versions of InterSystems CE that support SQL Table-Valued functions.

If people are interested then I'll learn how to post the single class needed to support this functionality. First a quick demo.

### Basic Query - return column names as a JSON Array

```
SELECT jsonarrayagg(colName)
FROM utility.statementcolumns( 'SELECT Name,DOB,HomeCity,HomeState from Sample.Person' )
```

The single row returned by this query is a JSON array.

```
["Name","DOB","HomeCity","HomeState"]
```

While this is a useful query, there is more.

### Query Statement Columns Returning Array of Objects

If you need more than just the column name for each column in the SQL statement, then simply use `JSONOBJECT` in the `JSONARRAYAGG`.

```
SELECT jsonarrayagg(jsonobject( 'name':colname,'type':odbctype,'nullable':isnullable,'readonly':isreadonly))
FROM utility.statementcolumns( 'SELECT Name,DOB,HomeCity,HomeState from Sample.Person' )
[ { "name": "Name", "type": 12, "nullable": false, "readonly": false }, { "name": "DOB", "type": 9, "nullable": true,
"readonly": false }, { "name": "HomeCity", "type": 12, "nullable": true, "readonly": false }, { "name": "HomeState",
"type": 12, "nullable": true, "readonly": false } ]
```

### Of Course, Basic Queries Work Too

No need to return this column metadata as JSON formatted strings. Simple `SELECT` works as well.

```
SELECT colname,odbctype,isnullable,isreadonly FROM utility.statementcolumns( 'SELECT
Name,DOB,HomeCity,HomeState from Sample.Person' )
```

## SQL Statement Metadata

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colName	ODBCType	isNullable	isReadOnly
Name	12	0	0
DOB	9	1	0
HomeCity	12	1	0
HomeState	12	1	0

[#InterSystems IRIS](#)

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