
Question

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SQL Query returns sorted Integer ID column as string

This is not an issue in ObjectScript, due to its typeless nature. But it's essential for external programming languages that care a bit more about types of variables.

And in any case, it's still reproducible in ObjectScript. I have table

```
CREATE TABLE some_table (  
    id INTEGER NOT NULL,  
    x INTEGER,  
    y INTEGER,  
    z VARCHAR(50),  
    PRIMARY KEY (id)  
)
```

And data

```
INSERT INTO some_table (id, x, y, z) VALUES (1, 1, 2, 'z1');  
INSERT INTO some_table (id, x, y, z) VALUES (2, 2, 3, 'z2');  
INSERT INTO some_table (id, x, y, z) VALUES (3, 3, 4, 'z3');  
INSERT INTO some_table (id, x, y, z) VALUES (4, 4, 5, 'z4');
```

Pretty simple.

Let's check and fetch all the data. \$ListBuild is more sensitive to the type of variables, so, I use it, to check the result.

```
USER>set rs= ##class(%SQL.Statement).%ExecDirect("SELECT id, x, y, z FROM some_table  
")
```

```
USER>while rs.%Next() { zwrite $listbuild(rs.id, rs.x, rs.y, rs.z) }  
$lb(1,1,2,"z1")  
$lb(2,2,3,"z2")  
$lb(3,3,4,"z3")  
$lb(4,4,5,"z4")
```

The expected result, the first three columns are INTEGER, and the last one is String. Let's sort it by id

```
USER>set rs= ##class(%SQL.Statement).%ExecDirect("SELECT id, x, y, z FROM some_table  
ORDER BY id")
```

```
USER>while rs.%Next() { zwrite $listbuild(rs.id, rs.x, rs.y, rs.z) }  
$lb("1",1,2,"z1")  
$lb("2",2,3,"z2")  
$lb("3",3,4,"z3")  
$lb("4",4,5,"z4")
```

And now, the first column, which is id, represented as a String

But, if I would like to sort it by some other field, it works well, and all types are correct

```
USER>set rs= ##class(%SQL.Statement).%ExecDirect(,"SELECT id, x, y, z FROM some_table  
ORDER BY x DESC")
```

```
USER>while rs.%Next() { zwrite $listbuild(rs.id, rs.x, rs.y, rs.z) }  
$lb(4,4,5,"z4")  
$lb(3,3,4,"z3")  
$lb(2,2,3,"z2")  
$lb(1,1,2,"z1")
```

Is there any workaround for this behavior? Why it changes the type of the resulting column?

[#Key Question](#) [#Python](#) [#SQL](#) [#InterSystems IRIS](#)

Product version: IRIS 2022.1

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Source URL: <https://community.intersystems.com/post/sql-query-returns-sorted-integer-id-column-string>