

# How is READ NEXT implemented in isCOBOL ESQL Generator (EasyDB)?

The START statement creates a cursor, and READ NEXT/PREVIOUS fetches the cursor. Using the isCOBOL debugger, you can step into the READ NEXT and the source code for the bridge programs generated by edbiis.exe to give you a better understanding of how this works.

By default, each elementary item maps to a separate column in the RDBMS. In order to read rows ordered by a composite key, the generated code uses multiple cursors successively with different where clauses.

## Note

That you can use the EFD USE-GROUP directive to instruct the isCOBOL ESQL Generator to store a composite key in a single column in the table. See the isCOBOL Evolve documentation, in the Language Reference book, under EFD Directives/USE GROUP Directive for more information.

Here is an example:

With the following FD key:

```
FD ACC. 01 ACC-REC.    05 ACC-KEY.    10 ACC-ID  PIC 9(6).    10 ACC-  
TY  PIC 9(3).    10 ACC-CU  PIC 9(3).    10 ACC-BR  PIC 9(3).    10 ACC-IN-  
CD PIC 9(2).
```

If you look at the generated code you will see the following WHERE clauses:

```
where (ACC_ID = ? and ACC_TY = ? and ACC_CU = ? and ACC_BR = ? and ACC_IN_CD >= ?)  
where (ACC_ID = ? and ACC_TY = ? and ACC_CU = ? and ACC_BR > ?)  where (ACC_ID = ? an  
d ACC_TY = ? and ACC_CU > ?)  where (ACC_ID = ? and ACC_TY > ?)  where (ACC_ID > ?)
```

so that if ACC-KEY is 00000100200300405 then the code for START ACC KEY NOT

```
where (ACC_ID = 1 and ACC_TY = 2 and ACC_CU = 3 and ACC_BR = 4 and ACC_IN_CD  
>= 5) order by ACC_ID, ACC_TY, ACC_BR, ACC_IN_CD
```

and after returning all of the rows in that result set (or if the result set it empty), then the code uses

```
where (ACC_ID = 1 and ACC_TY = 2 and ACC_CU = 3 and ACC_BR > 4) order by ACC_ID, ACC  
_TY, ACC_BR, ACC_IN_CD
```

and after returning all of the rows in that result set (or if the result set it empty), then the code uses

```
where (ACC_ID = 1 and ACC_TY = 2 and ACC_CU > 3) order by ACC_ID, ACC_TY, ACC_BR, ACC_IN_CD
```

and after returning all of the rows in that result set (or if the result set is empty), then the code uses

```
where (ACC_ID = 1 and ACC_TY > 2) order by ACC_ID, ACC_TY, ACC_BR, ACC_IN_CD
```

and after returning all of the rows in that result set (or if the result set is empty), then the code uses

```
where (ACC_ID > 1) order by ACC_ID, ACC_TY, ACC_BR, ACC_IN_CD
```

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