

Software Test Homework1.2

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homework: **Briefly describe an error from your past projects** that you have recently completed or an error from other projects which impress you most. State the reason, impact of the error , how did you find it and how to fix it.

Error:

Use Kotlin to operate the database, the following error occurs when executing the delete statement:

```
can not find column
```

Reason of the error:

The error is very clear: if the column is not found, it cannot be deleted naturally, indicating that the column does not exist.

Impact of the error:

The program crashed during the delete operation, so that the program did not complete the expected function.

How I find the error:

First check my code and compare whether there is a column (`_id`) that should be delete when creating table:

It does. I created this column obviously, but I can't find it? Very confused. 🤔

```
// params of the table
object HistoryRecordContract {
    const val TABLE_NAME = "myTable" // name of table
    const val ID = "_id" // id, unique
    const val CONTENT = "content"
}

// use db.createTable to create table
override fun onCreate(db: SQLiteDatabase?) {
    db?.createTable(HistoryRecordContract.TABLE_NAME, true,
        Pair(HistoryRecordContract.ID, INTEGER +
PRIMARY_KEY + AUTOINCREMENT),
        Pair(HistoryRecordContract.CONTENT, TEXT))
}

// delete statement
db.delete("myTable", "_id = {userID}", "userID" to minID)
```

Then I chose to read the API document and source code of the called interface, and learn clearly about the operator steps inside the `createTable` function:

I found a key judgment point: If the second parameter passed in the `createTable` method is `true`, first judge the same name table whether be create or not, and if the table has been created, then the new table will not be create again.

Therefore, I realized that a same table without column named `"_id"` was created when I test the api at first. As a result, the same name table that I want to create formally later was not be created successfully.

How to fixed the error:

To fix the error, there are two ways:

The first method is to set the second parameter passed in when calling the `db.createTable` method to false, so that the table with column named "_id" can be created successfully.

The second method is to delete the original table with the same name.

In fact, the first method is not feasible. Because if you execute the first method to fix the error, every time you open the application (`onCreate`), a new table will be created to overwrite the old table with same, causing losing the history data of the table. So only the second method to fixed the error is accessible.