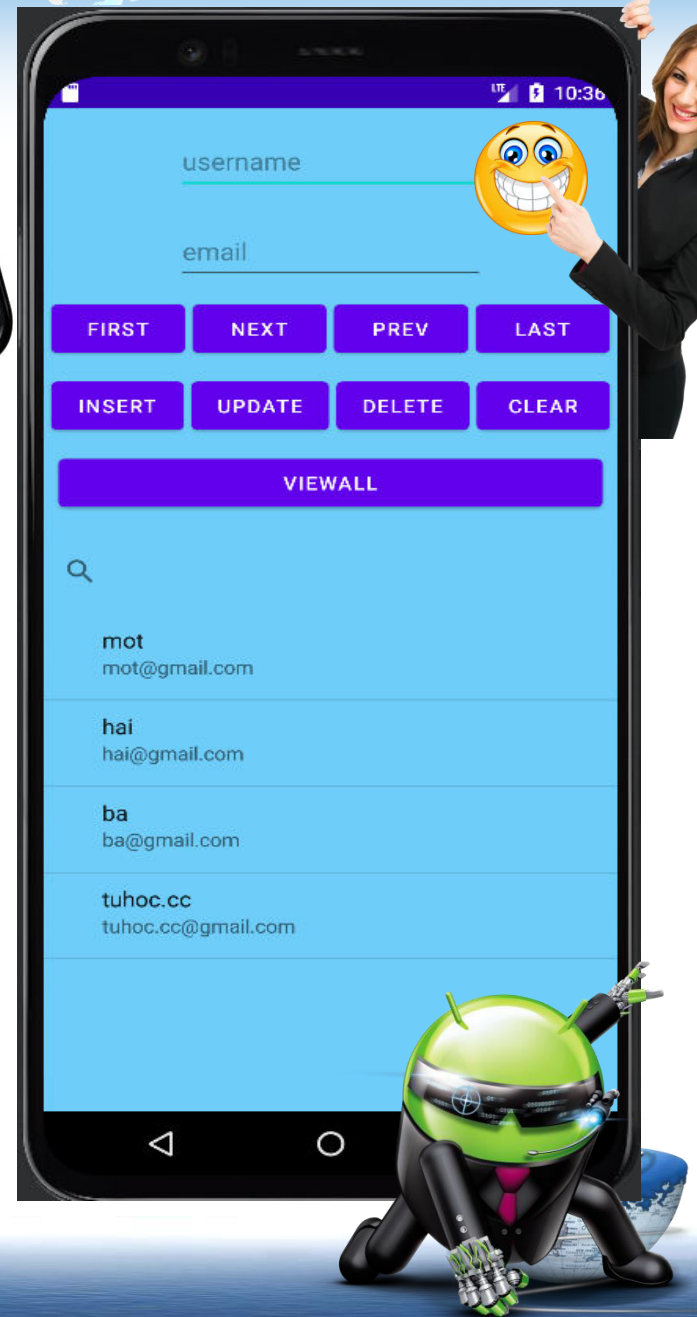




SQLite CRUD

**insert, select, update,
delete and display data
in listview**



1 Thiết kế layout ứng dụng

Full code bài 22-4

<http://android.tuhoc.cc/>

22-4.bai22-4-crud-sqlite-tuhoc.cc.zip

```
<SearchView
    android:id="@+id/searchView"
    android:layout_width="match_parent"
    android:layout_height="63dp"
    android:visibility="gone" />

<ListView
    android:id="@+id/lvFull"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:visibility="gone" />
```

Searchview và lvFull sẽ ẩn

username

email

FIRST NEXT PREV LAST

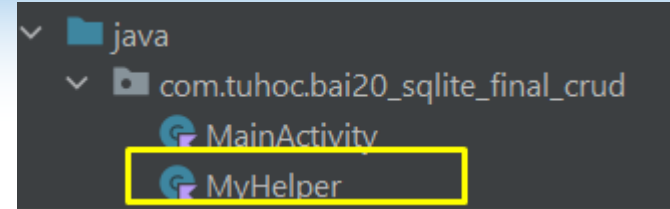
INSERT UPDATE DELETE CLEAR

VIEWALL



2

Tạo Class MyHelper



```
class MyHelper(context: Context) : SQLiteOpenHelper(context, name: "TUHOCDB", factory: null, version: 1) {
    //ctrl + i
    override fun onCreate(db: SQLiteDatabase?) {
        //tạo table , column
        db?.execSQL( sql: "CREATE TABLE TUHOC(_id integer primary key autoincrement,user TEXT, email TEXT)")
        //thêm data vào cơ sở dữ liệu
        db?.execSQL( sql: "Insert into TUHOC(user,email) values ('mot','mot@gmail.com')")
        db?.execSQL( sql: "Insert into TUHOC(user,email) values ('hai','hai@gmail.com')")
        db?.execSQL( sql: "Insert into TUHOC(user,email) values ('ba','ba@gmail.com')")
        db?.execSQL( sql: "Insert into TUHOC(user,email) values ('tuhoc.cc','tuhoc.cc@gmail.com')")
    }

    override fun onUpgrade(db: SQLiteDatabase?, oldVersion: Int, newVersion: Int) {
        TODO(reason: "Not yet implemented")
    }
}
```



3

Code MainActivity

```
class MainActivity : AppCompatActivity() {

    lateinit var db: SQLiteDatabase
    lateinit var rs : Cursor
    lateinit var adapter: SimpleCursorAdapter

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

        var helper = MyHelper(applicationContext)
        db = helper.readableDatabase
        rs = db.rawQuery( sql: "SELECT * FROM TUHOC LIMIT 20", selectionArgs: null)
        //sql : String chuỗi câu lệnh SQL
        //String[] selectionArgs: Chọn lọc dữ liệu với điều kiện mảng

        //1. đưa thử dữ liệu của dòng đầu tiên trong db lên edtuser và edtEmail
        if (rs.moveToLast()){
            edtUser.setText(rs.getString( columnIndex: 1))
            edtEmail.setText(rs.getString( columnIndex: 2))
        }
    }
}
```



3

Code MainActivity

```
//2.code cho button first
```

```
btnFirst.setOnClickListener { it: View!
    if (rs.moveToFirst()){
        edtUser.setText(rs.getString( columnIndex: 1))
        edtEmail.setText(rs.getString( columnIndex: 2))
    }
    else
        Toast.makeText(applicationContext, text: "No data found",Toast.LENGTH_SHORT).show()
}
```

```
//3.code cho button next
```

```
btnNext.setOnClickListener { it: View!
    if (rs.moveToNext()){
        edtUser.setText(rs.getString( columnIndex: 1))
        edtEmail.setText(rs.getString( columnIndex: 2))
    }
    else if (rs.moveToFirst()){
        edtUser.setText(rs.getString( columnIndex: 1))
        edtEmail.setText(rs.getString( columnIndex: 2))
    }
    else
        Toast.makeText(applicationContext, text: "No data found",Toast.LENGTH_SHORT
}
```



3

Code MainActivity

```
//4.code cho prev
btnPrev.setOnClickListener { it: View!
    if (rs.moveToPrevious()){
        edtUser.setText(rs.getString( columnIndex: 1))
        edtEmail.setText(rs.getString( columnIndex: 2))
    }
    else if (rs.moveToLast()){
        edtUser.setText(rs.getString( columnIndex: 1))
        edtEmail.setText(rs.getString( columnIndex: 2))
    }
    else
        Toast.makeText(applicationContext, text: "No data found", Toast.LENGTH_SHORT).show()
}

//5.code cho button last
btnLast.setOnClickListener { it: View!
    if (rs.moveToLast()){
        edtUser.setText(rs.getString( columnIndex: 1))
        edtEmail.setText(rs.getString( columnIndex: 2))
    }
    else
        Toast.makeText(applicationContext, text: "No data found", Toast.LENGTH_SHORT).show()
}
```



3

Code MainActivity

```
//6. code phần lvFull
adapter = SimpleCursorAdapter(
    applicationContext, android.R.layout.simple_expandable_list_item_2, rs,
    arrayOf("user", "email"), intArrayOf(android.R.id.text1, android.R.id.text2), flags: 0
)
lvFull.adapter = adapter
//7. code cho nút viewall
btnViewAll.setOnClickListener { it: View!
    searchView.visibility = View.VISIBLE
    lvFull.visibility = View.VISIBLE
    adapter.notifyDataSetChanged()
    searchView.queryHint = "Tìm kiếm trong ${rs.count} bản ghi"
}

//code cho phần tìm kiếm nội dung
searchView.setOnQueryTextListener(object : SearchView.OnQueryTextListener{
    //ctrl + i
    override fun onQueryTextSubmit(query: String?): Boolean {
        return false
    }

    override fun onQueryTextChange(newText: String?): Boolean {
        rs = db.rawQuery( sql: "SELECT * FROM TUHOC WHERE user LIKE '%${newText}' or email LIKE '%${newText}'",
            selectionArgs: null)
        adapter.changeCursor(rs)
        return true
    }
})
```



3

Code MainActivity

```
//8. code cho nút insert
btnInsert.setOnClickListener { it: View!
    var cv = ContentValues()
    cv.put("user", edtUser.text.toString())
    cv.put("email", edtEmail.text.toString())
    db.insert(table: "TUHOC", nullColumnHack: null, cv)
    rs.requery()
    adapter.notifyDataSetChanged()

    var ad = AlertDialog.Builder(context: this)
    ad.setTitle("Add record")
    ad.setMessage("Add thành công")
    ad.setPositiveButton(text: "OK", DialogInterface.OnClickListener { dialog, which ->
        edtUser.setText("")
        edtEmail.setText("")
        edtUser.requestFocus()
    })
    ad.show()
}
```



3

Code MainActivity

```
//9. code cho nút update
btnUpdate.setOnClickListener { it: View!
    var cv = ContentValues()
    cv.put("user", edtUser.text.toString())
    cv.put("email", edtEmail.text.toString())
    db.update( table: "TUHOC", cv, whereClause: "_id=?", arrayOf(rs.getString( columnIndex: 0)))
    rs.requery()
    adapter.notifyDataSetChanged()

    var ad = AlertDialog.Builder( context: this)
    ad.setTitle("Update record")
    ad.setMessage("Update thành công")
    ad.setPositiveButton( text: "OK", DialogInterface.OnClickListener { dialog, which ->
        edtUser.setText("")
        edtEmail.setText("")
        edtUser.requestFocus()
    })
    ad.show()
}
```



3

Code MainActivity

```
//10. code nút clear
btnClear.setOnClickListener { it: View!
    edtUser.setText("")
    edtEmail.setText("")
    edtUser.requestFocus()
}

//11.code delete
btnDelete.setOnClickListener { it: View!
    db.delete( table: "TUHOC", whereClause: "_id=?", arrayOf(rs.getString( columnIndex: 0)))
    rs.requery()
    adapter.notifyDataSetChanged()
    //thông báo
    var ad = AlertDialog.Builder( context: this)
    ad.setTitle("Update record")
    ad.setMessage("Update thành công")
    ad.setPositiveButton( text: "OK", DialogInterface.OnClickListener { dialog, which ->
        if (rs.moveToFirst()){
            edtUser.setText("")
            edtEmail.setText("")
            edtUser.requestFocus()
        }
        else
        {
            edtUser.setText("No data found")
            edtEmail.setText("No data found")
        }
    })
    ad.show()
}
```



3

Code MainActivity

```
//đăng ký sử dụng context menu cho listview lvFull
registerForContextMenu(lvFull)

}

override fun onCreateContextMenu(
    menu: ContextMenu?,
    v: View?,
    menuInfo: ContextMenu.ContextMenuInfo?
) {
    super.onCreateContextMenu(menu, v, menuInfo)
    menu?.add( groupId: 100, itemId: 11, order: 1, title: "DELETE")
    menu?.setTitle("Removing data")
}

override fun onContextItemSelected(item: MenuItem): Boolean {
    if (item.itemId==11)
    {
        //Toast.makeText(applicationContext,"Click lên item trên menu",Toast.LENGTH_SHORT).show()
        db.delete( table: "TUHOC", whereClause: "_id=?", arrayOf(rs.getString( columnIndex: 0)))
        rs.requery()
        adapter.notifyDataSetChanged()
        searchView.queryHint ="Tìm kiếm trong ${rs.count} bản ghi"
    }

    return super.onContextItemSelected(item)
}
```

