

## 110360129 林軒至 應用軟體實習 Lab1

### (一)讀書會

組員:

110360121 廖華翊

110360129 林軒至

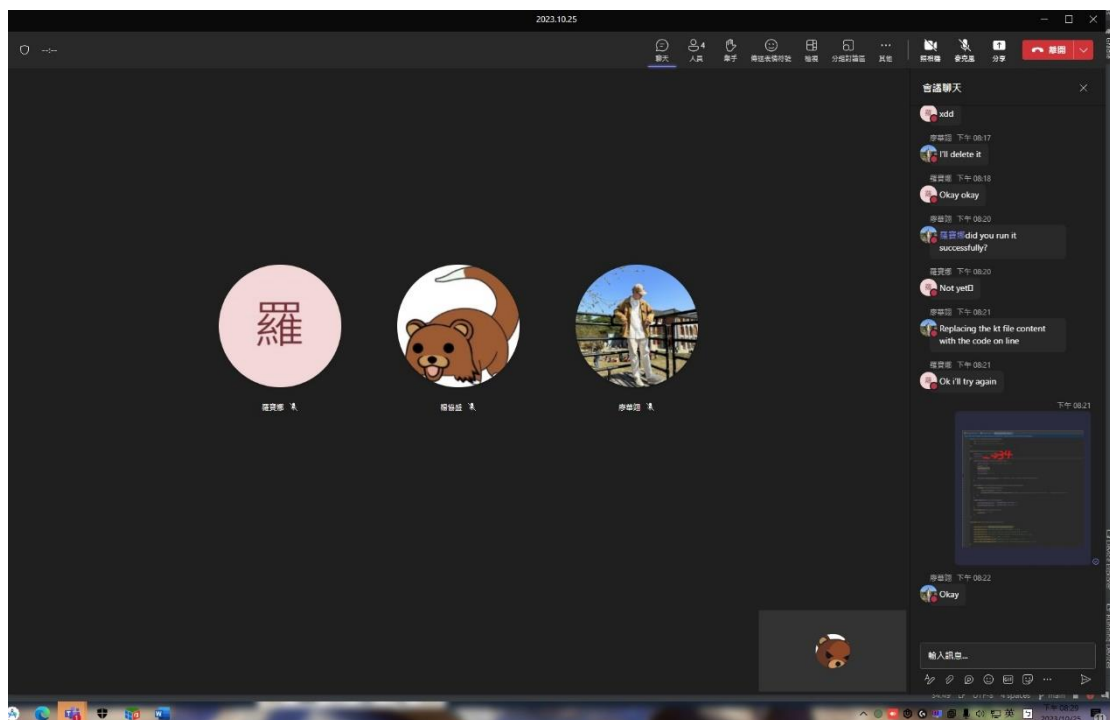
110360130 楊協盛

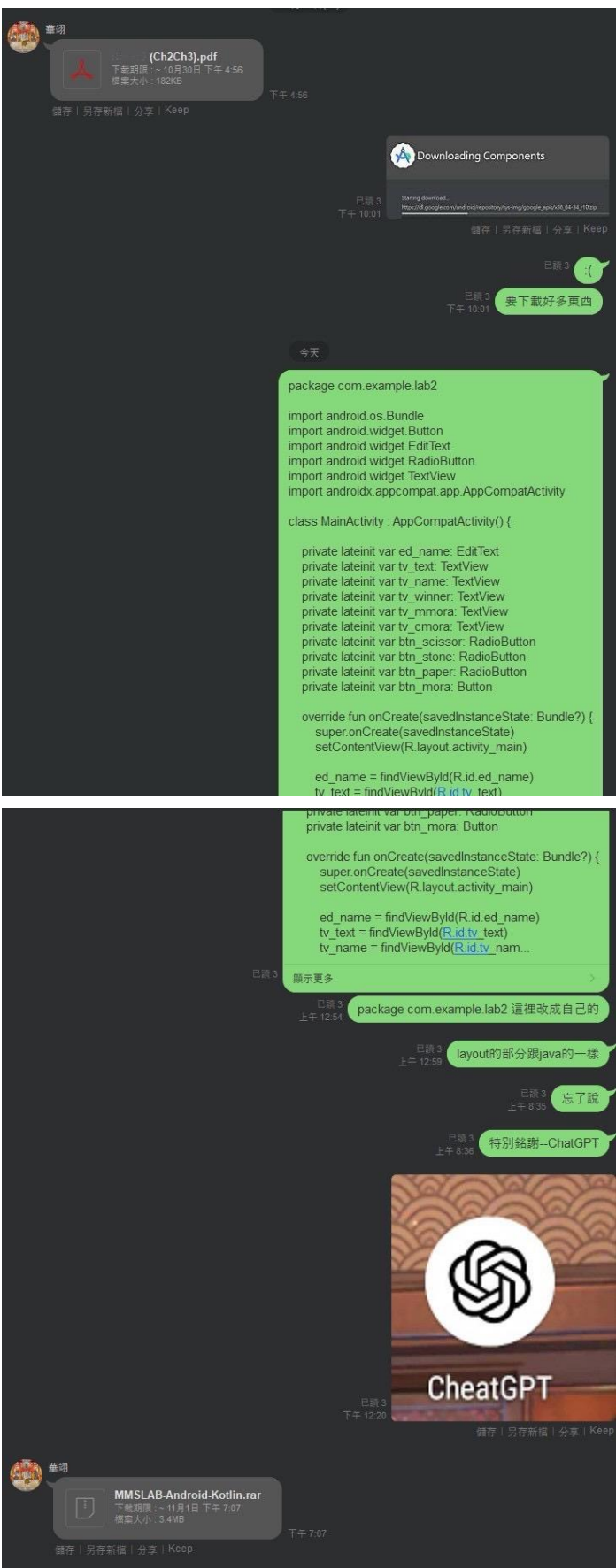
110360155 羅寶娜

討論時間: 2023/10/25 19:30~20:30

地點: Teams 線上開會 Line 討論

開會截圖:





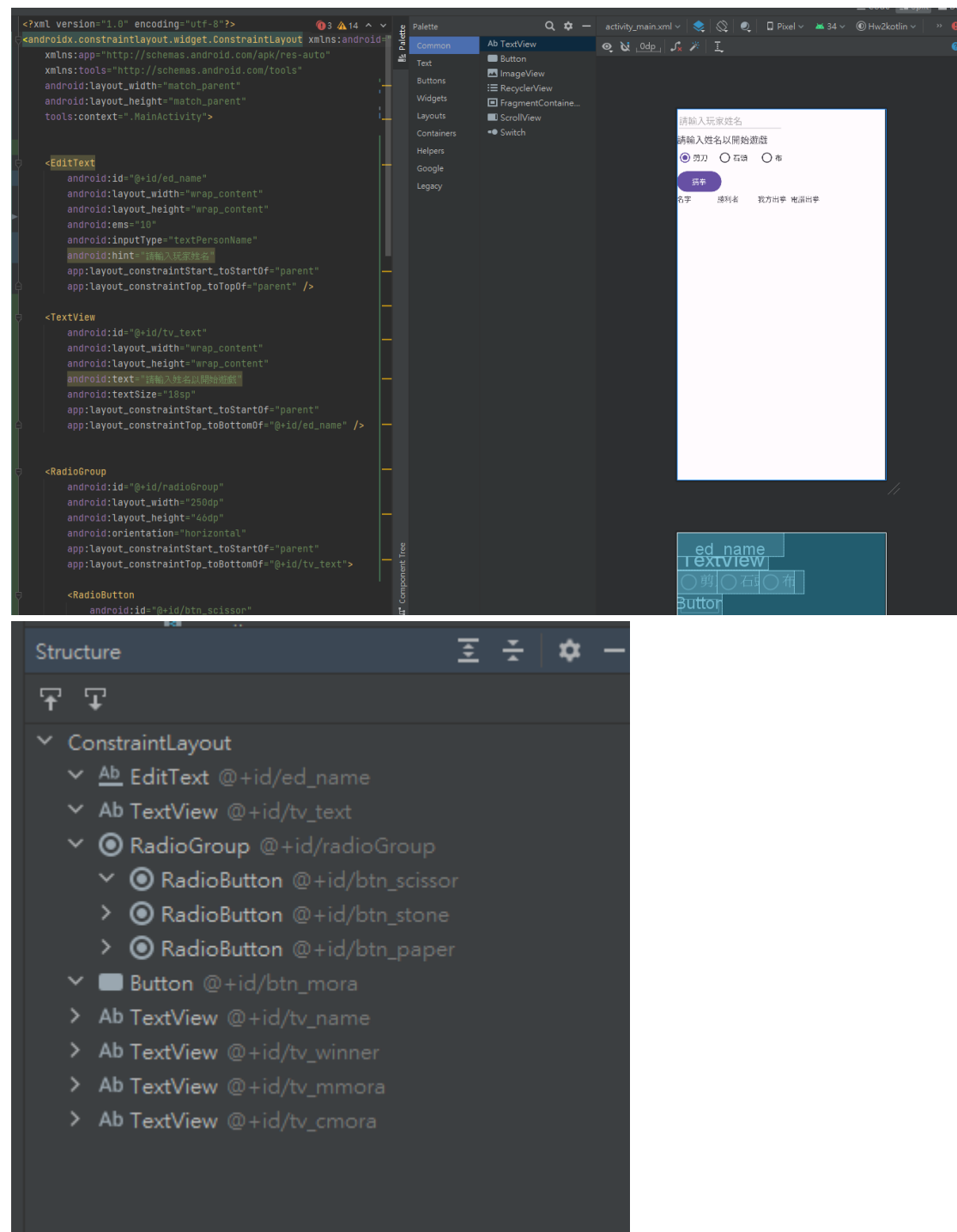
Github:

<https://github.com/s098031/112-1-mmslab-java-lab02.git>

<https://github.com/s098031/112-1-mmslab-kotlin-lab02.git>

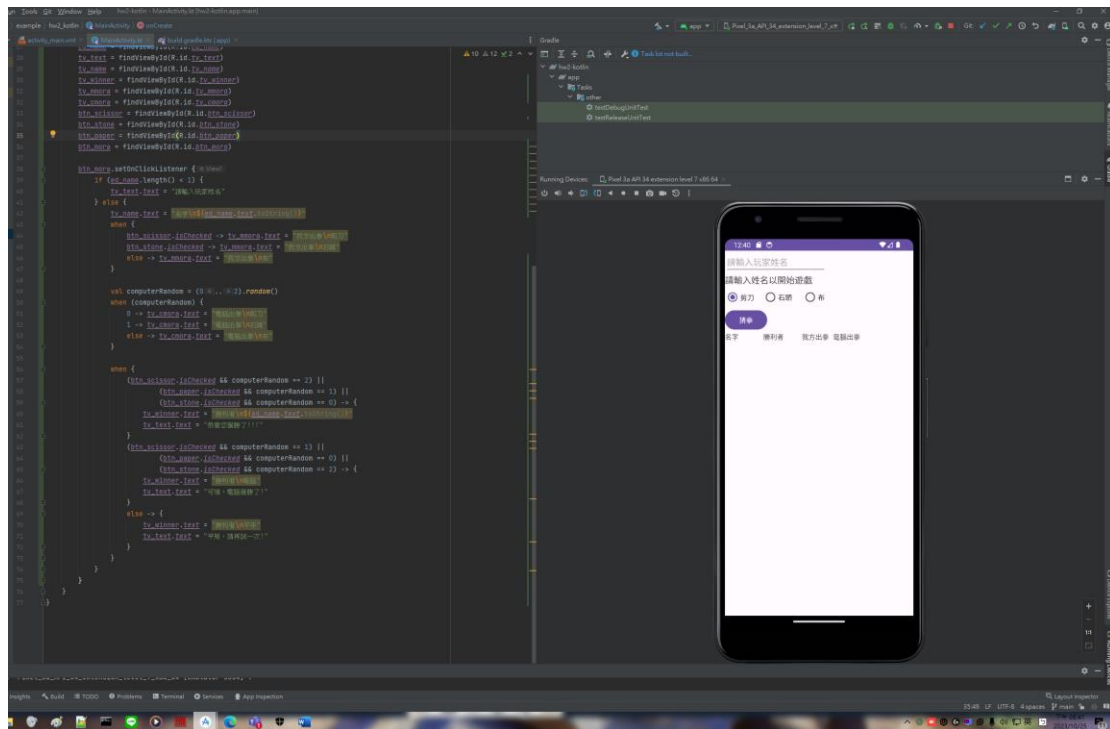
HW2:

外觀設計:

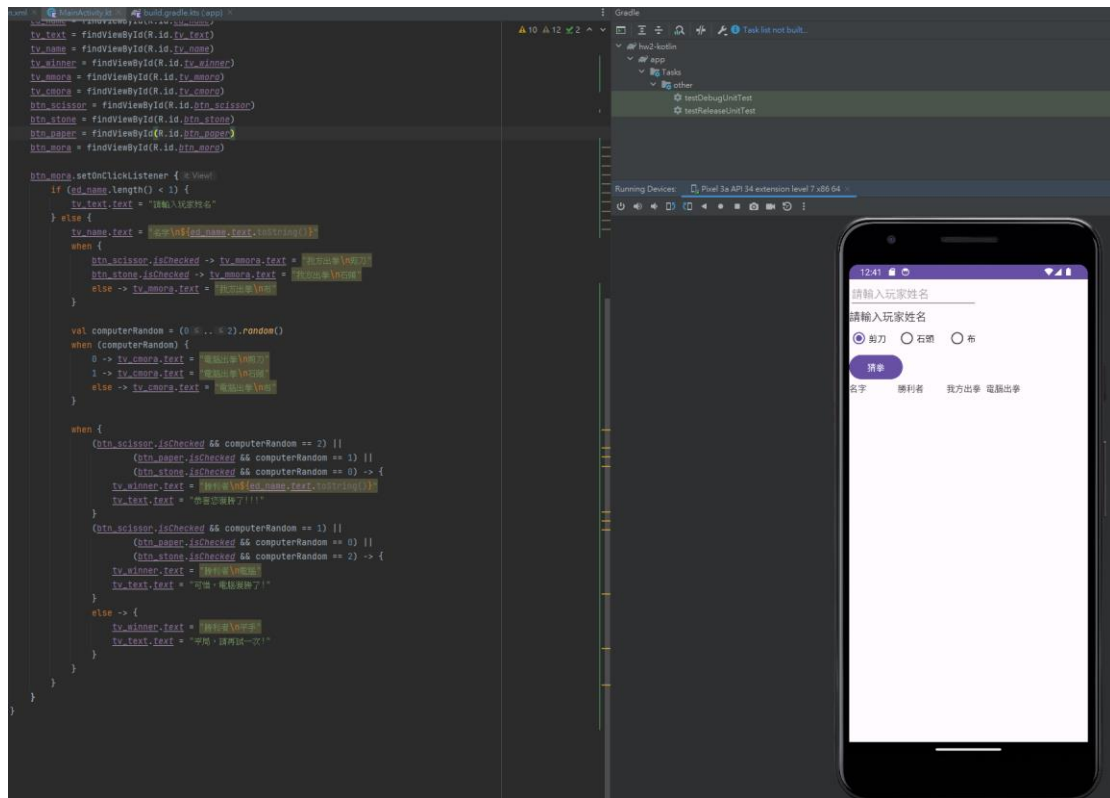


HW3:

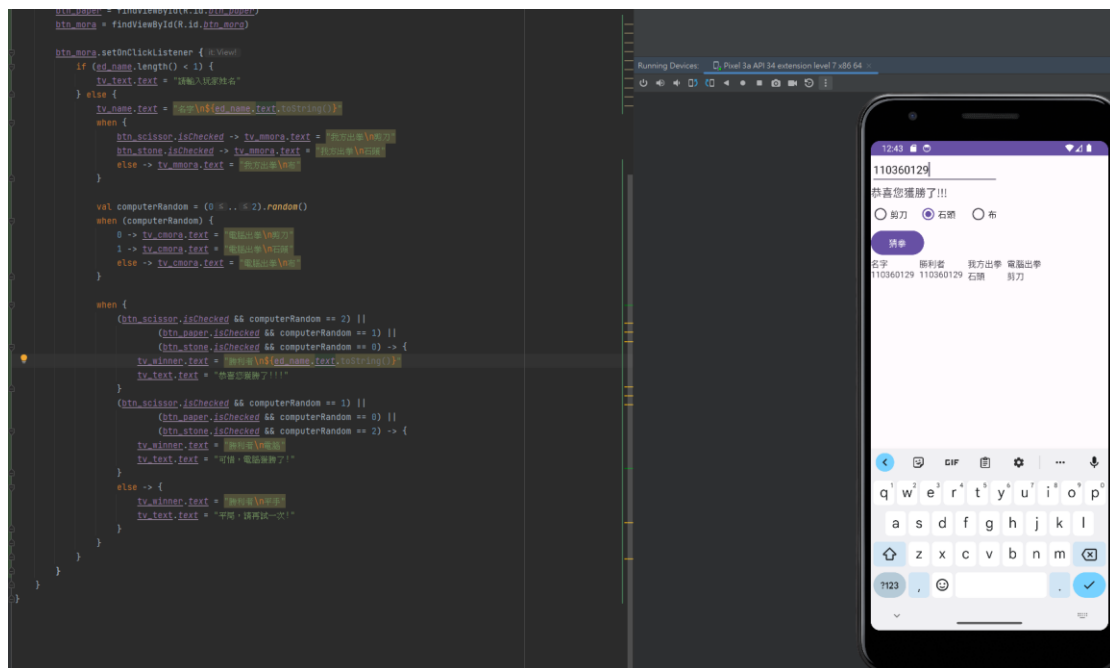
執行畫面截圖：



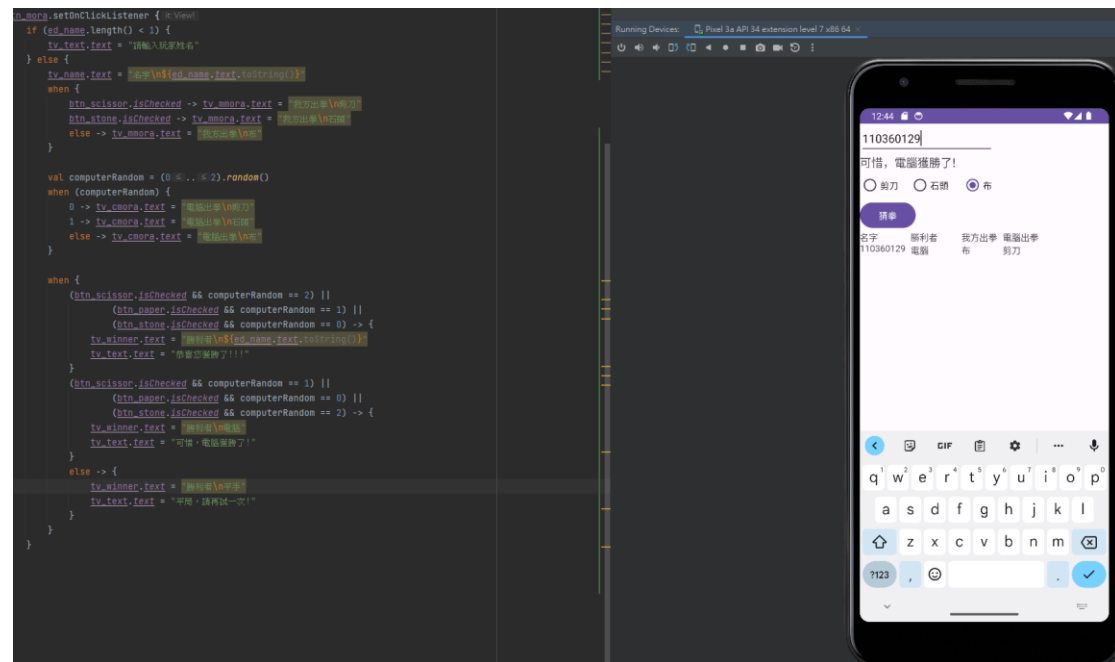
不輸入姓名直接猜拳:



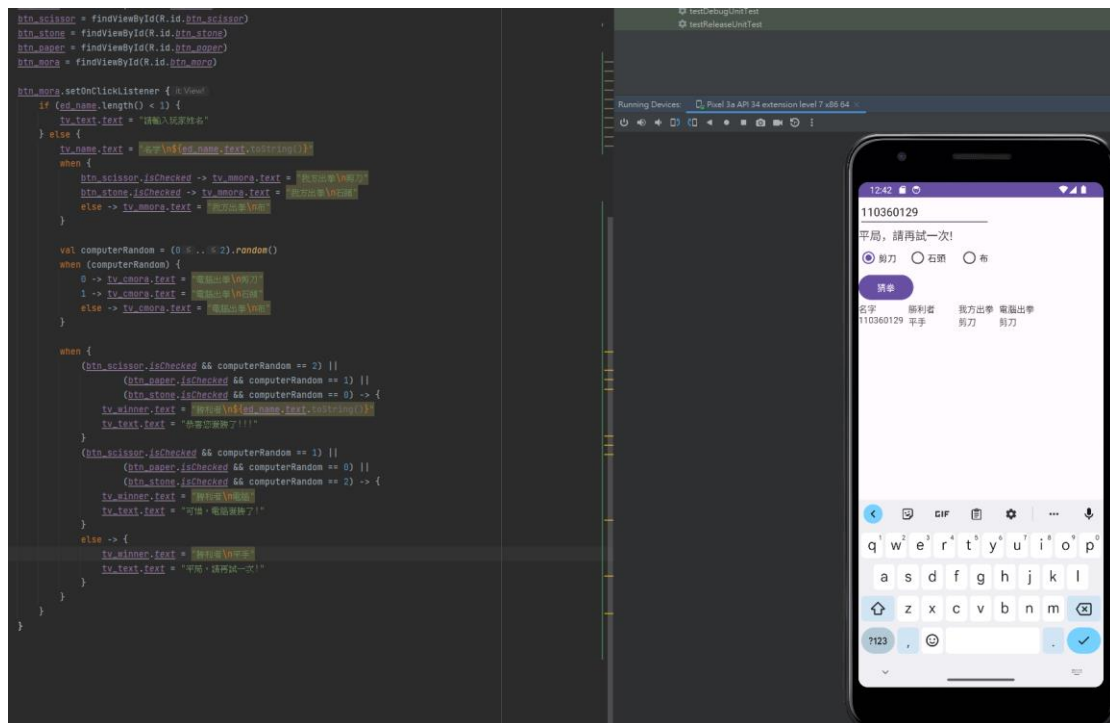
我方赢:



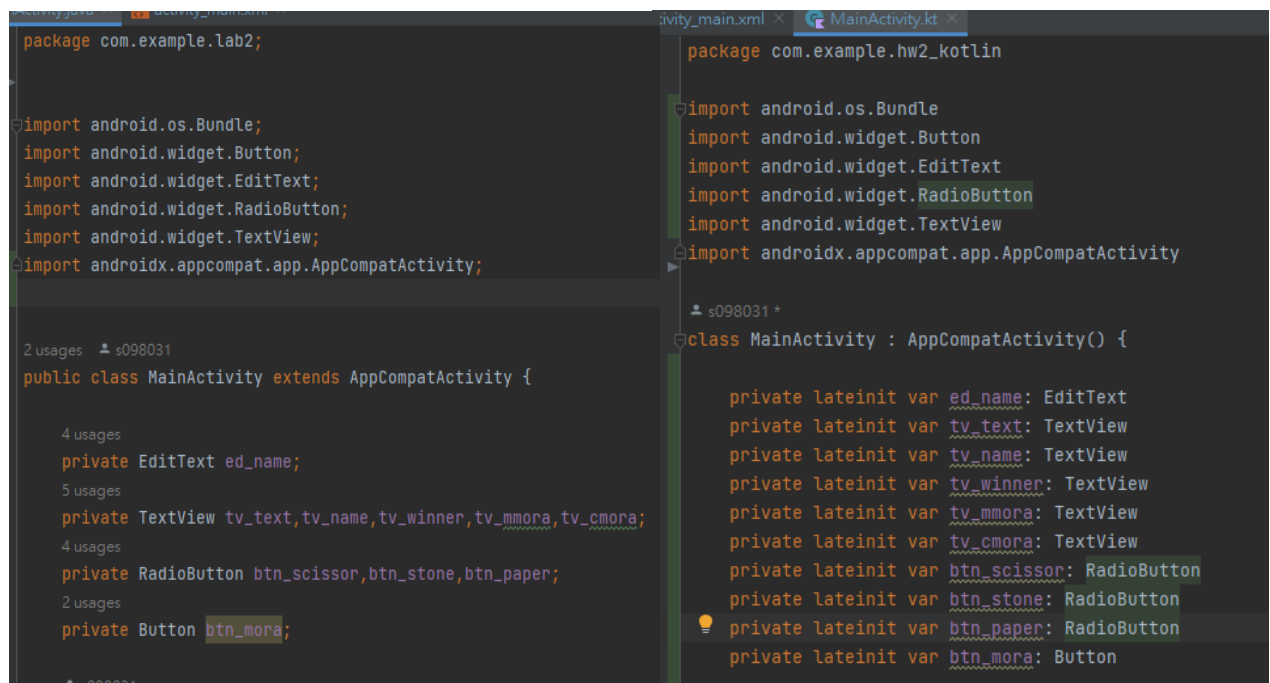
電腦贏:



平手:



JAVA 與 kotlin 兩種語法上的差異(左邊 JAVA 右邊 kotlin)





```

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);

    ed_name = findViewById(R.id.ed_name);
    tv_text = findViewById(R.id.tv_text);
    tv_name = findViewById(R.id.tv_name);
    tv_winner = findViewById(R.id.tv_winner);
    tv_mmora = findViewById(R.id.tv_mmora);
    tv_cmora = findViewById(R.id.tv_cmora);
    btn_scissor = findViewById(R.id.btn_scissor);
    btn_stone = findViewById(R.id.btn_stone);
    btn_paper = findViewById(R.id.btn_paper);
    btn_mora = findViewById(R.id.btn_mora);

    btn_mora.setOnClickListener(View -> {
        if (ed_name.length() < 1) {
            tv_text.setText("請輸入玩家姓名");
        } else {
            tv_name.setText(String.format("名字\n%s", ed_name.getText().toString()));
            if (btn_scissor.isChecked()) {
                tv_mmora.setText("我方出拳\n剪刀");
            } else if (btn_stone.isChecked()) {
                tv_mmora.setText("我方出拳\n石頭");
            } else { //else if(btn_paper.isChecked()){
                tv_mmora.setText("我方出拳\n布");
            }

            int computer_random = (int)(Math.random() * 3);

            if (computer_random == 0) {
                tv_cmora.setText("電腦出拳\n剪刀");
            } else if (computer_random == 1) {
                tv_cmora.setText("電腦出拳\n石頭");
            } else { //else if(computer_random == 2){
                tv_cmora.setText("電腦出拳\n布");
            }

            if ((btn_scissor.isChecked() && computer_random == 2) ||
                (btn_paper.isChecked() && computer_random == 1) ||
                (btn_stone.isChecked() && computer_random == 0)) {
                tv_winner.setText("勝利者\n" + ed_name.getText().toString());
                tv_text.setText("恭喜您獲勝了!!!");
            } else if ((btn_scissor.isChecked() && computer_random == 1) ||
                (btn_paper.isChecked() && computer_random == 0) ||
                (btn_stone.isChecked() && computer_random == 2)) {
                tv_winner.setText("勝利者\n電腦");
                tv_text.setText("可惜，電腦獲勝了!");
            } else {
                tv_winner.setText("勝利者\n平手");
                tv_text.setText("平局，請再試一次!");
            }
        }
    });
}

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

    ed_name = findViewById(R.id.ed_name)
    tv_text = findViewById(R.id.tv_text)
    tv_name = findViewById(R.id.tv_name)
    tv_winner = findViewById(R.id.tv_winner)
    tv_mmora = findViewById(R.id.tv_mmora)
    tv_cmora = findViewById(R.id.tv_cmora)
    btn_scissor = findViewById(R.id.btn_scissor)
    btn_stone = findViewById(R.id.btn_stone)
    btn_paper = findViewById(R.id.btn_paper)
    btn_mora = findViewById(R.id.btn_mora)

    btn_mora.setOnClickListener { it: View?
        if (ed_name.length() < 1) {
            tv_text.text = "請輸入玩家姓名"
        } else {
            tv_name.text = "名字\n${ed_name.text.toString()}"
            when {
                btn_scissor.isChecked -> tv_mmora.text = "我方出拳\n剪刀"
                btn_stone.isChecked -> tv_mmora.text = "我方出拳\n石頭"
                else -> tv_mmora.text = "我方出拳\n布"
            }

            val computerRandom = (0 ≤ .. ≤ 2).random()
            when (computerRandom) {
                0 -> tv_cmora.text = "電腦出拳\n剪刀"
                1 -> tv_cmora.text = "電腦出拳\n石頭"
                else -> tv_cmora.text = "電腦出拳\n布"
            }

            when {
                (btn_scissor.isChecked && computerRandom == 2) ||
                (btn_paper.isChecked && computerRandom == 1) ||
                (btn_stone.isChecked && computerRandom == 0) -> {
                    tv_winner.text = "勝利者\n${ed_name.text.toString()}"
                    tv_text.text = "恭喜您獲勝了!!!"
                }
                (btn_scissor.isChecked && computerRandom == 1) ||
                (btn_paper.isChecked && computerRandom == 0) ||
                (btn_stone.isChecked && computerRandom == 2) -> {
                    tv_winner.text = "勝利者\n電腦"
                    tv_text.text = "可惜，電腦獲勝了!"
                }
                else -> {
                    tv_winner.text = "勝利者\n平手"
                    tv_text.text = "平局，請再試一次!"
                }
            }
        }
    }
}

```

可以看到 kotlin 與發不需要使用;作為分行的結尾，同時也比 JAVA 更簡潔，但是代價是在特定地方閱讀性可能會變差，例如這裡：

## JAVA

```

else {
    tv_name.setText(String.format("名字\n%s", ed_name.getText().toString()));
    if (btn_scissor.isChecked()) {

```

## Kotlin

```

else {
    tv_name.text = "名字\n${ed_name.text.toString()}"
    when {

```

我認為 kotlin 的語法比較不直觀，打的過程會多想一下子。