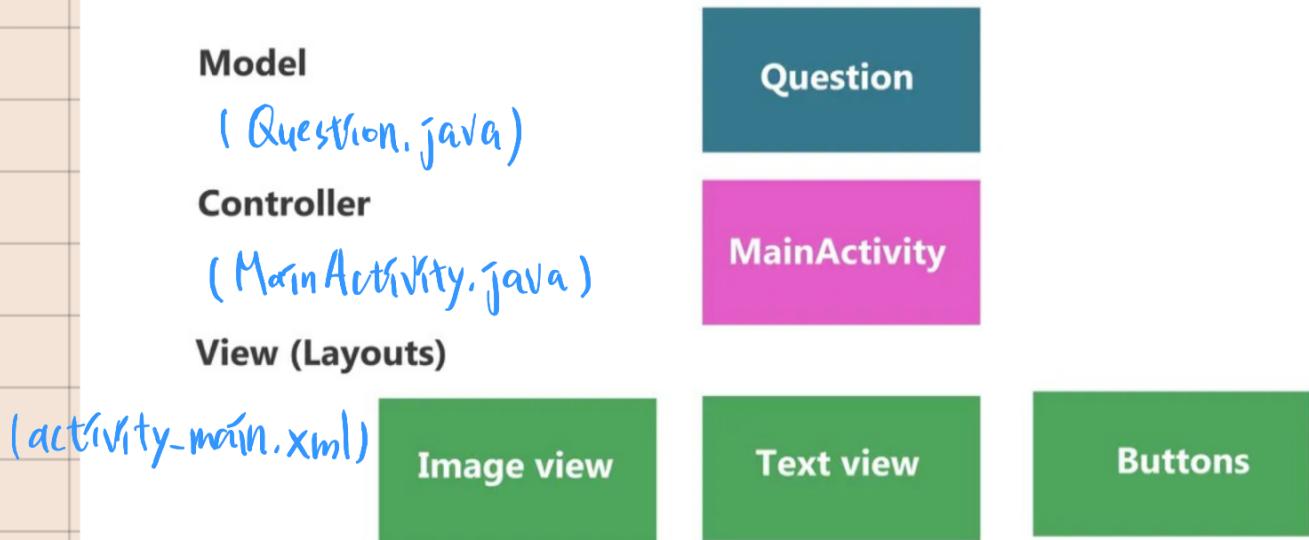


MVC Architecture

Model-View-Controller Architecture



Quiz App

Designing UI

Change background color of a button

Search "backgroundTint"

Select both button → Pack Horizontally

→ Connect constraints → select both

→ right click → center → Horizontally

→ Right click → Horizontal Chain Style → Packed

→ Adjust right button margin

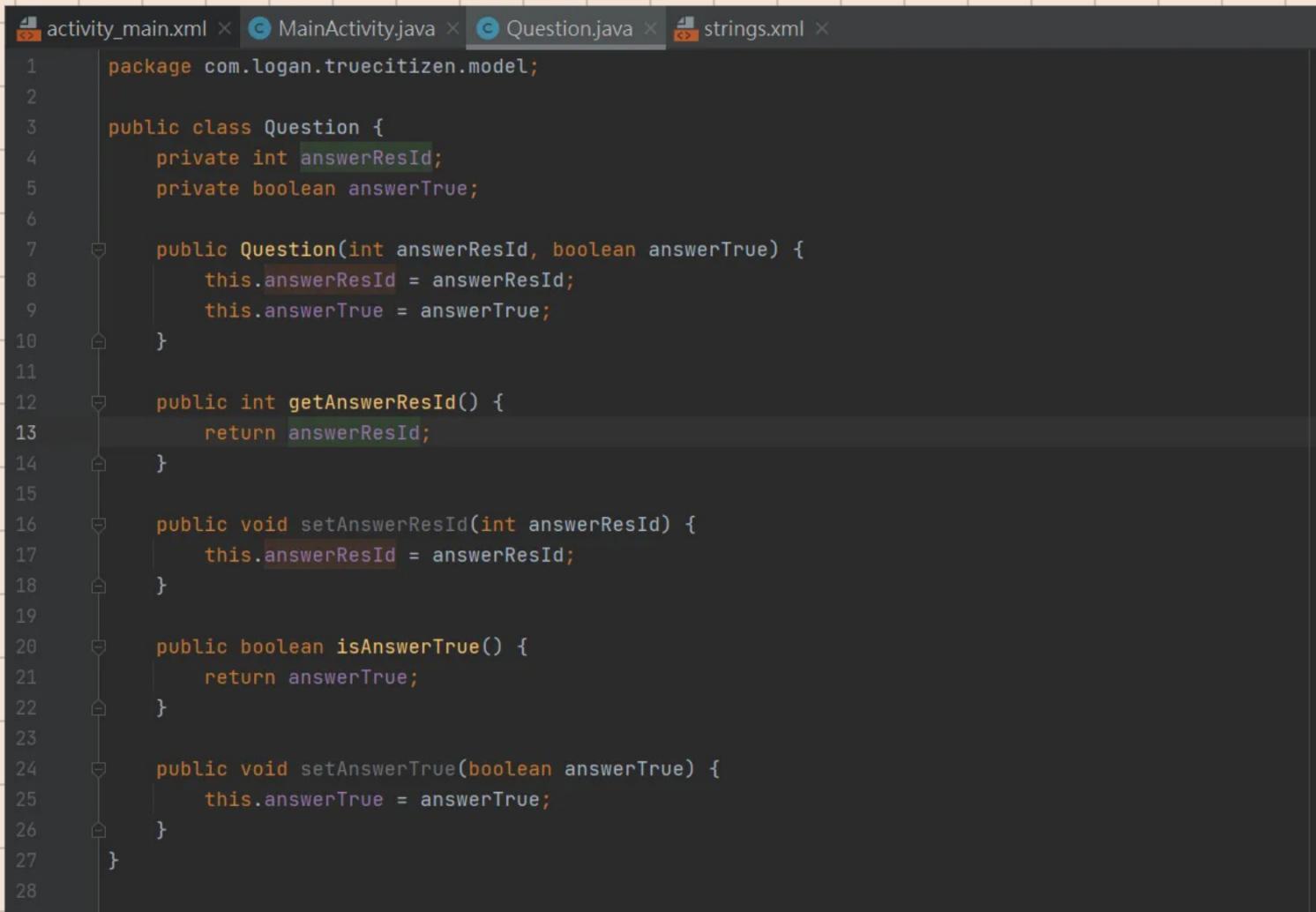
Start Data Binding

1° Right click /java/com.logan.truecitizen

→ New → package → Package → com.logan.truecitizen.model

2° Right Click model → New → Java Class → Question.java

3° Question.java



```
activity_main.xml x MainActivity.java x Question.java x strings.xml x
1 package com.logan.truecitizen.model;
2
3 public class Question {
4     private int answerResId;
5     private boolean answerTrue;
6
7     public Question(int answerResId, boolean answerTrue) {
8         this.answerResId = answerResId;
9         this.answerTrue = answerTrue;
10    }
11
12    public int getAnswerResId() {
13        return answerResId;
14    }
15
16    public void setAnswerResId(int answerResId) {
17        this.answerResId = answerResId;
18    }
19
20    public boolean isAnswerTrue() {
21        return answerTrue;
22    }
23
24    public void setAnswerTrue(boolean answerTrue) {
25        this.answerTrue = answerTrue;
26    }
27
28 }
```

* Note: app/java/generated 是 Build 之後產生的文件

標頭圖像就是Build (Make Project)

4° MainActivity.java

```
activity_main.xml x MainActivity.java x Question.java x strings.xml x
1 package com.logan.truecitizen;
2
3 import ...
4
5 public class MainActivity extends AppCompatActivity {
6     private ActivityMainBinding binding;
7     private int currentQuestionIndex = 0;
8
9     private Question[] questionBank = new Question[]{
10         new Question(R.string.question_amendments, answerTrue: false), // R.string.amendments
11         new Question(R.string.question_constitution, answerTrue: true),
12         new Question(R.string.question_declaration, answerTrue: true),
13         new Question(R.string.question_independence_rights, answerTrue: true),
14         new Question(R.string.question_religion, answerTrue: true),
15         new Question(R.string.question_government, answerTrue: false),
16         new Question(R.string.question_government_feds, answerTrue: false),
17         new Question(R.string.question_government_senators, answerTrue: true),
18     };
19
20
21     @Override
22     protected void onCreate(Bundle savedInstanceState) {
23         super.onCreate(savedInstanceState);
24         setContentView(R.layout.activity_main);
25         binding = DataBindingUtil.setContentView(activity: this, R.layout.activity_main);
26
27         binding.questionTextView.setText(questionBank[currentQuestionIndex].getAnswerResId());
28         binding.nextButton.setOnClickListener(view -> {
29             currentQuestionIndex = (currentQuestionIndex + 1) % questionBank.length;
30             updateQuestion();
31         });
32
33         binding.prevButton.setOnClickListener(view -> {
34             if (currentQuestionIndex > 0){
35                 currentQuestionIndex = (currentQuestionIndex - 1) % questionBank.length;
36                 updateQuestion();
37             }
38         });
39
40         binding.trueButton.setOnClickListener(view -> {
41             checkAnswer(userChooseCorrect: true);
42         });
43
44         binding.falseButton.setOnClickListener(view -> {
45             checkAnswer(userChooseCorrect: false);
46         });
47
48     }
49
50     private void updateQuestion(){
51         binding.questionTextView.setText(questionBank[currentQuestionIndex].getAnswerResId());
52     }
53
54     private void checkAnswer(boolean userChooseCorrect){
55         boolean answerIsCorrect = questionBank[currentQuestionIndex].isAnswerTrue();
56         int messageId;
57     }
58
59
60
61
62
63
64
65
```

事先宣告在 string.xml 的問題
R.string 可以是字符串
也可以是 "int" !!

宣告 Binding Obj

宣告 Question obj

的正確解答

設定初動問題

用 % 進行 loop

button 的 onClick function

getter

getter

```
66
67     if(answerIsCorrect == userChooseCorrect){
68         messageId = R.string.correct_answer;
69     }else{
70         messageId = R.string.wrong_answer;
71     }
72
73     Snackbar.make(binding.imageView4, messageId, Snackbar.LENGTH_SHORT).show();
74
75 }
```

可以是任何 View obj

