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CS591 E3 Mobile App Development

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Assignment 4 Textbook Problems

Chapter 3: *Short Answers/Fill in the Code*

```
// 3.14
int rowSize = 4;
int columnSize = 2;

GridLayout gridLayout = new GridLayout(this);
gridLayout.setColumnCount(columnSize);
gridLayout.setRowCount(rowSize);


// 3.15
private Button button = new Button(this);


// 3.16
int btnRowSize = 5;
int btnColumnSize = 2;

private Button [][] buttons = new Button[btnRowSize][btnColumnSize];
for(int row = 0; row < btnRowSize; row++){
    for(int col = 0; col < btnColumnSize: col++) {
        // create the 5x2 2d array of buttons in current context
        buttons[row][col] = new Button(this);
        // add buttons to layout or something
    }
}


// 3.17
GridLayout gl = new GridLayout(this);
private Button b = new Button(this);
// width and height of screen size we want
int w = 200;

gl.addView(b,w,w);


// 3.21
private class ButtonHandler implements View.OnClickListener {
    public void onClick( View v ){
        // assuming b is an already created single button object
        if (v == b) {
            // w is an appropriate screen size to display the message
            Log.w("Yes");
        } else {
            Log.w("No");
        }
    }
}
```

Chapter 4: *Multiple Choice*

4.1) As a table of rows and columns

4.2) ViewGroup

4.3) LinearLayout

4.4) So that we position components relative to other components

4.5) android.content

4.6) startActivity

4.7) onRestart

4.8) onCreate, onStart, and onResume (in that order)

4.9) onStop

4.10) Yes, for example by each accessing a public static instance variable from another class

Chapter 7: *Multiple Choice, Short Answers/Fill in the Code*

7.1) setOnTouchListener

7.2) getAction

7.3) bringToFront

7.4) GestureDetector

7.5) Public static inner interfaces of GestureDetector

7.6) Private methods/Constants that the action can be compared to ??

7.7) onTouchEvent

```java
// 7.18
protected void onCreate( Bundle savedInstanceState ){
    super.onCreate( savedInstanceState );
    // Your code goes here
    setContentView(R.layout.activity_main);
    View view = findViewById(android.R.id.content);
    view.setOnTouchListener(this);

}

...

Detector is a private GestureDetector instance variable and the method is under MainActivity
class that extends AppCompatActivity and implements GestureDetector.OnGestureListener.

...

// 7.19
public boolean onTouchEvent( MotionEvent event ){
    // Your code goes here
    detector.onTouchEvent(event);
    return true;
}
```