Mobile Programming

Lec 4. Counter, Add, Multiply

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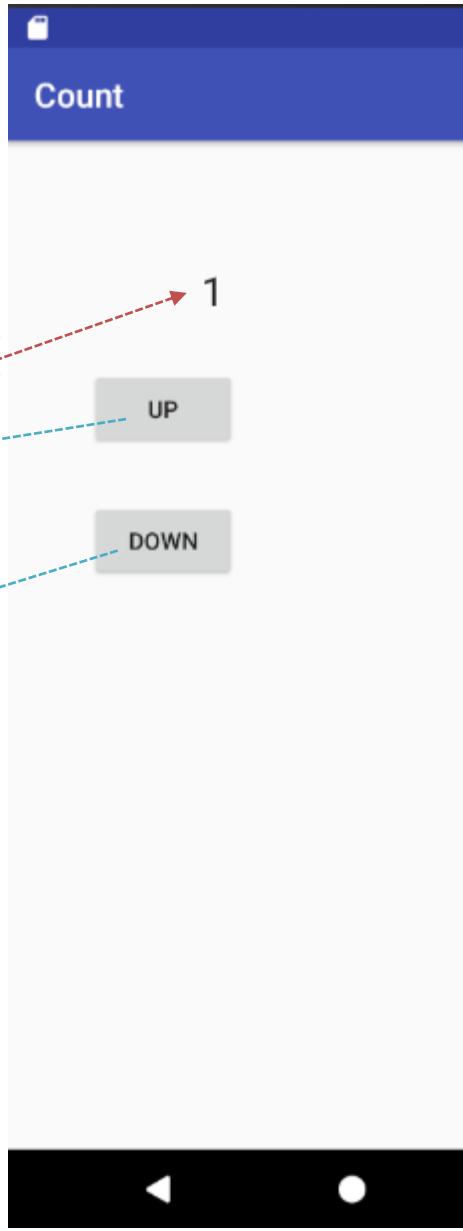
(1) Count up/down

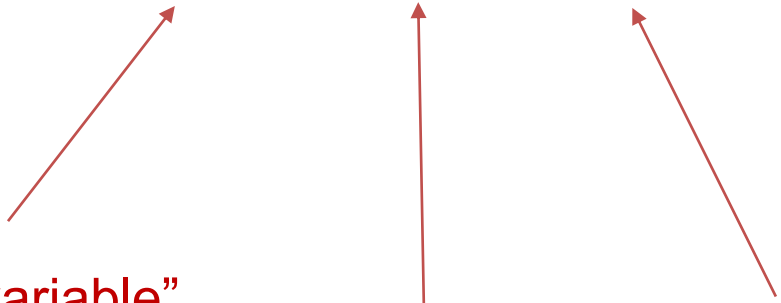
variable

```
class MainActivity : AppCompatActivity() {

    var number = 0

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

    fun button_up(view : View) {
        number = number + 1
        textView.text = "" + number
    }

    fun button_down(view : View) {
        number = number - 1
        textView.text = "" + number
    }
}
```



Define a variable (Integer)


```
var number = 0
```



Indicate “variable”

name of variable

initial value (Integer)

“variable” can vary

```
number = number + 1
```

Convert a number to “Text”


```
fun button_up(view : View) {
    number = number + 1
    textView.text = number
}
```

requite “text”

but it’s a number(integer)

```
fun button_up(view : View) {
    number = number + 1
    textView.text = "Val:" + number
}
```

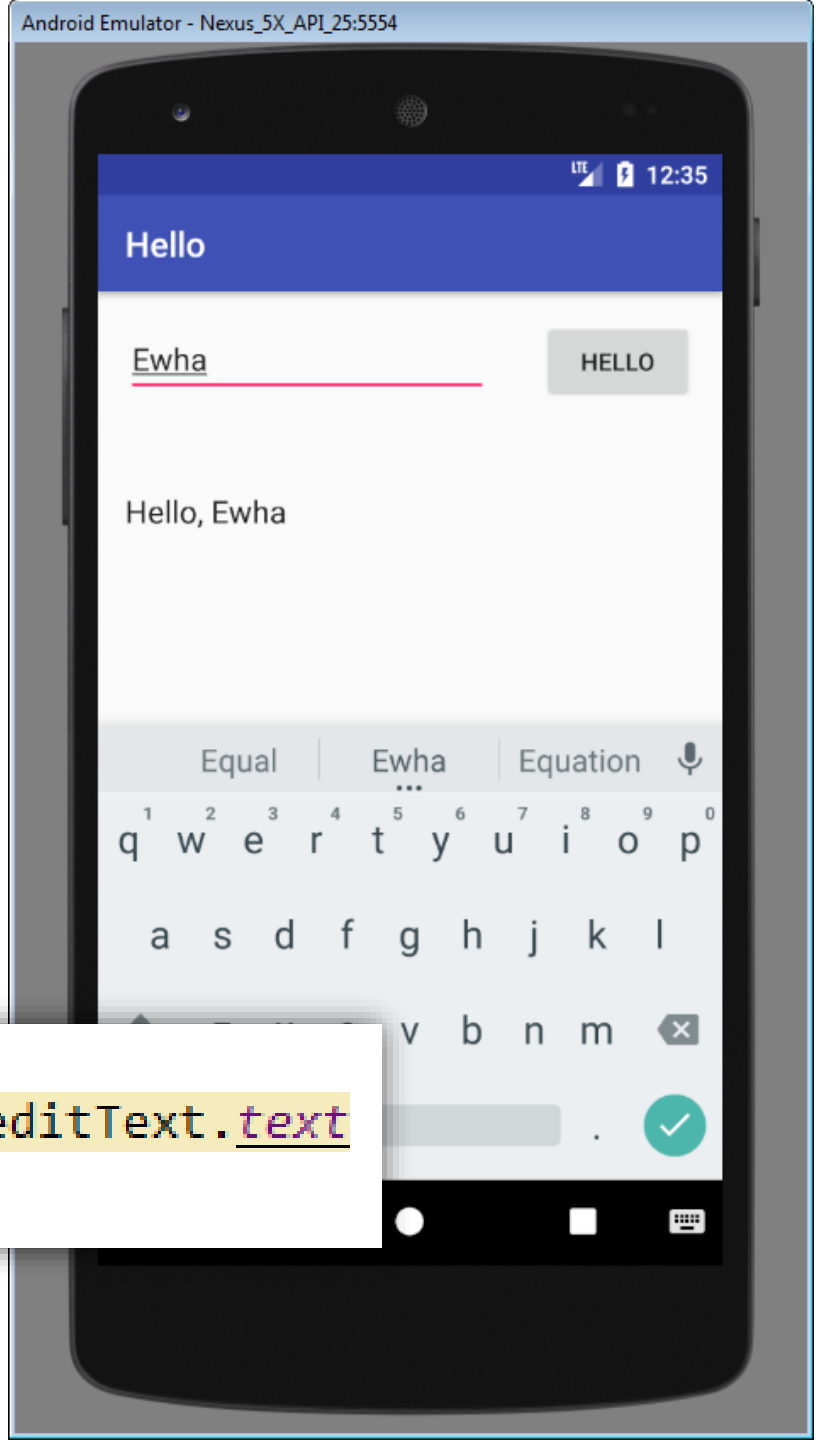
text + number → text

“Val:xxx”

```
fun button_up(view : View) {
    number = number + 1
    textView.text = "" + number
}
```

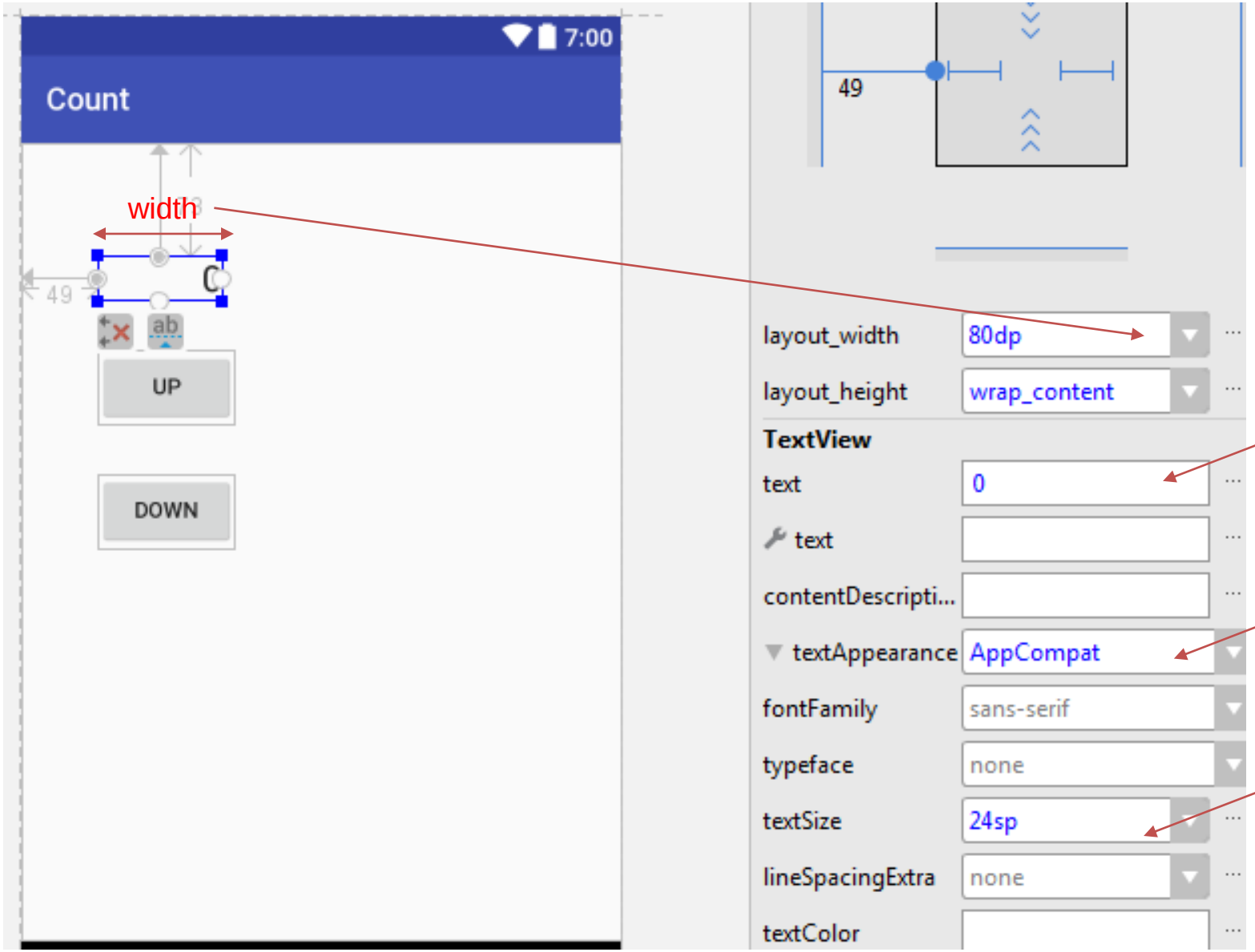
zero-length text

ex) text + text → text

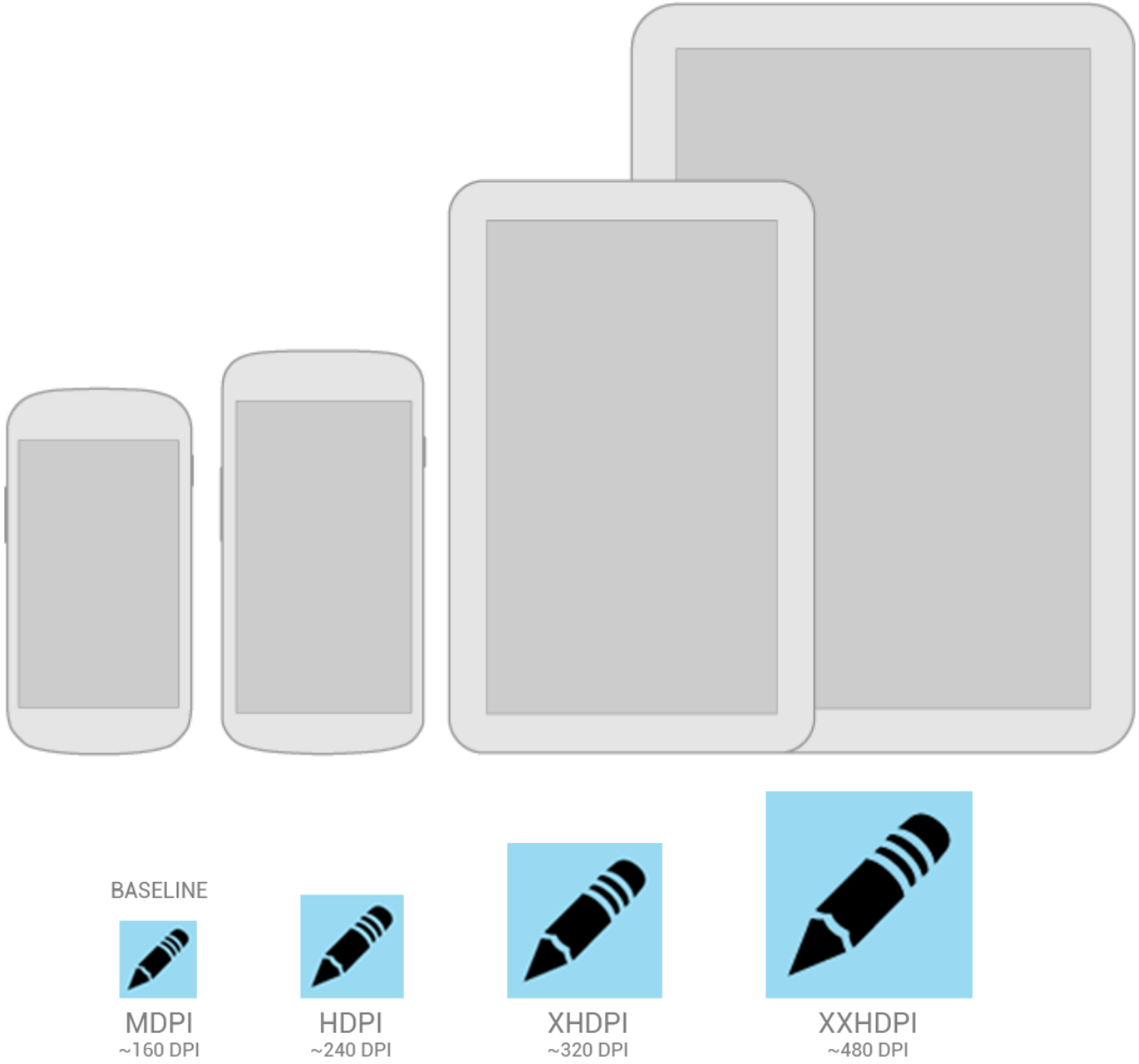



```
fun button1(view : View) {
    textView.text = "Hello, " + editText.text
}
```

Make text darker, bigger. And, fix the width.



Vary in size, but also in density(DPI)

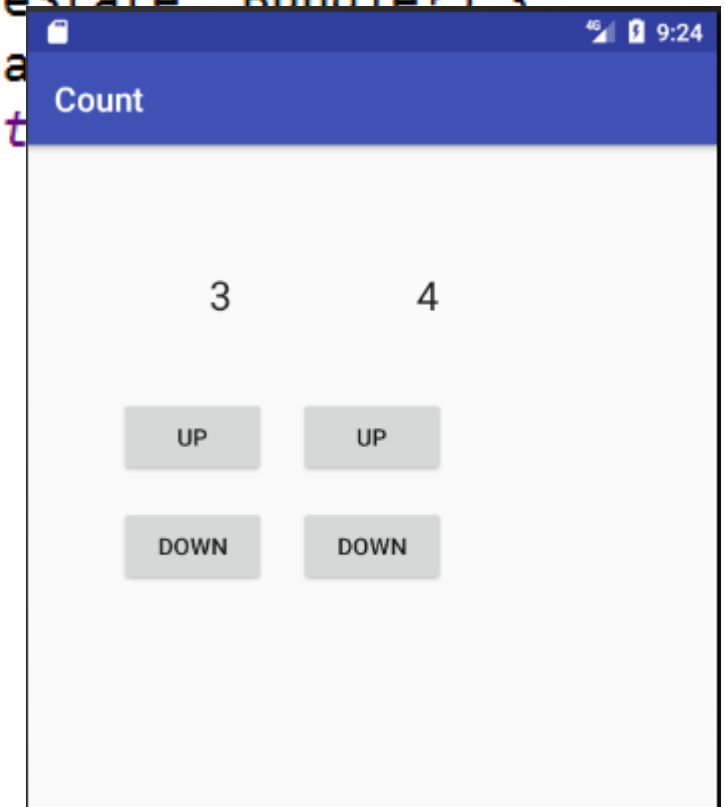


Units

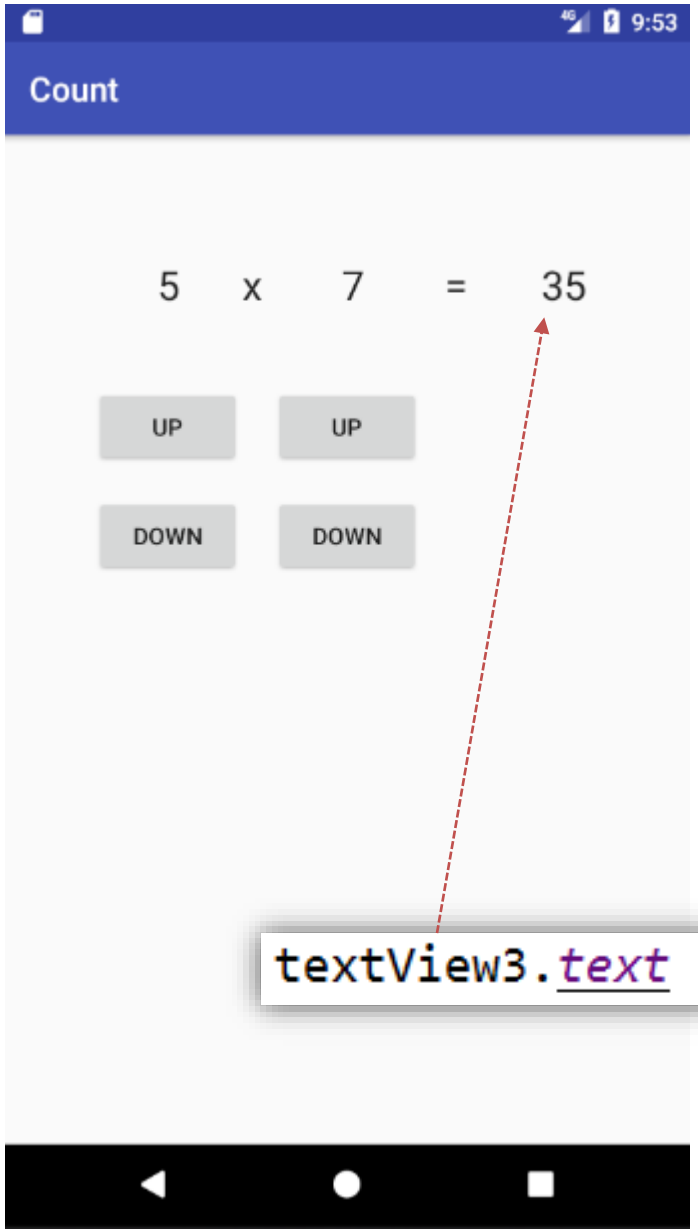
- dp
  - Density-independent Pixels - An abstract unit that is based on the physical density of the screen of 160 dpi
- sp
  - Scale-independent Pixels. This is like the dp unit, but it is also scaled by the user's font size preference.
- pt
  - 1/72 inch
- px
  - pixel
- mm
- in

(2) Make two counters


```
class MainActivity : AppCompatActivity() {

    var number1 = 0
    var number2 = 0


    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceSta
        setContentView(R.layout.activit
    }
```



(3) 구구단 App?




```
textView3.text = "" + number1 * number2
```

Add-up App

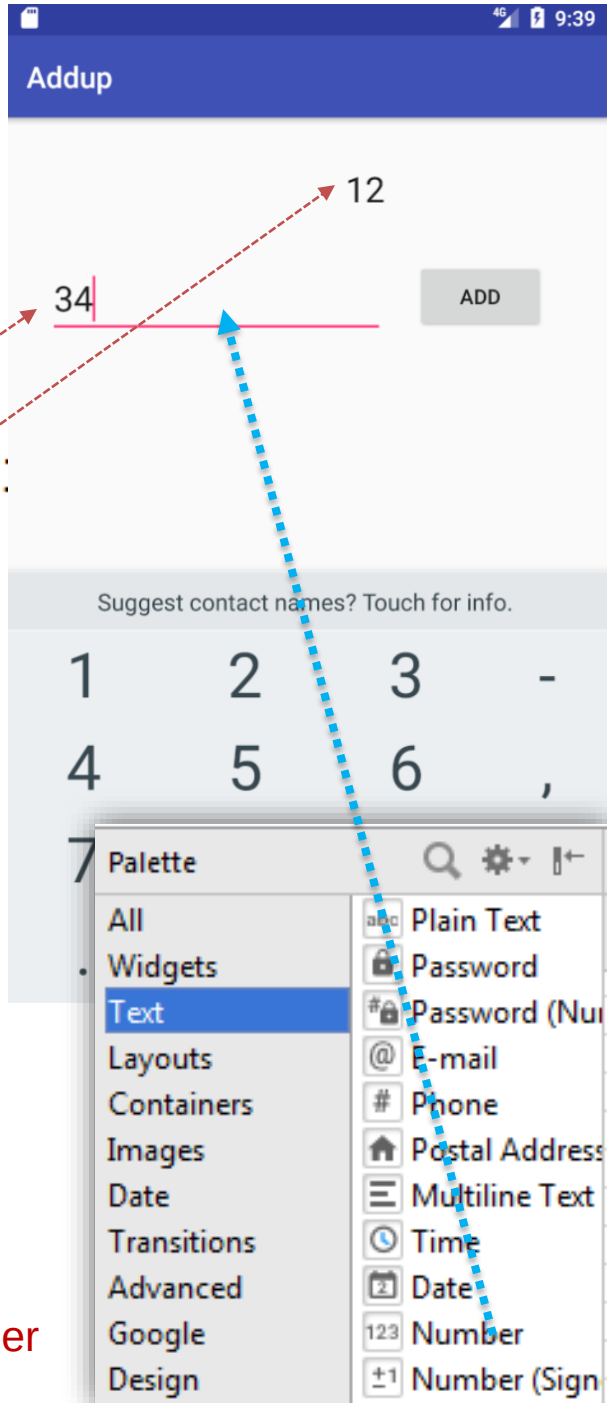
(4) Add up !

```
class MainActivity : AppCompatActivity() {

    var sum = 0

    override fun onCreate(savedInstanceState: Bund
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
    }

    fun addup(view : View) {

        var n = editText.text.toString().toInt()

        sum = sum + n

        textView.text = "" + sum

    }
}
```

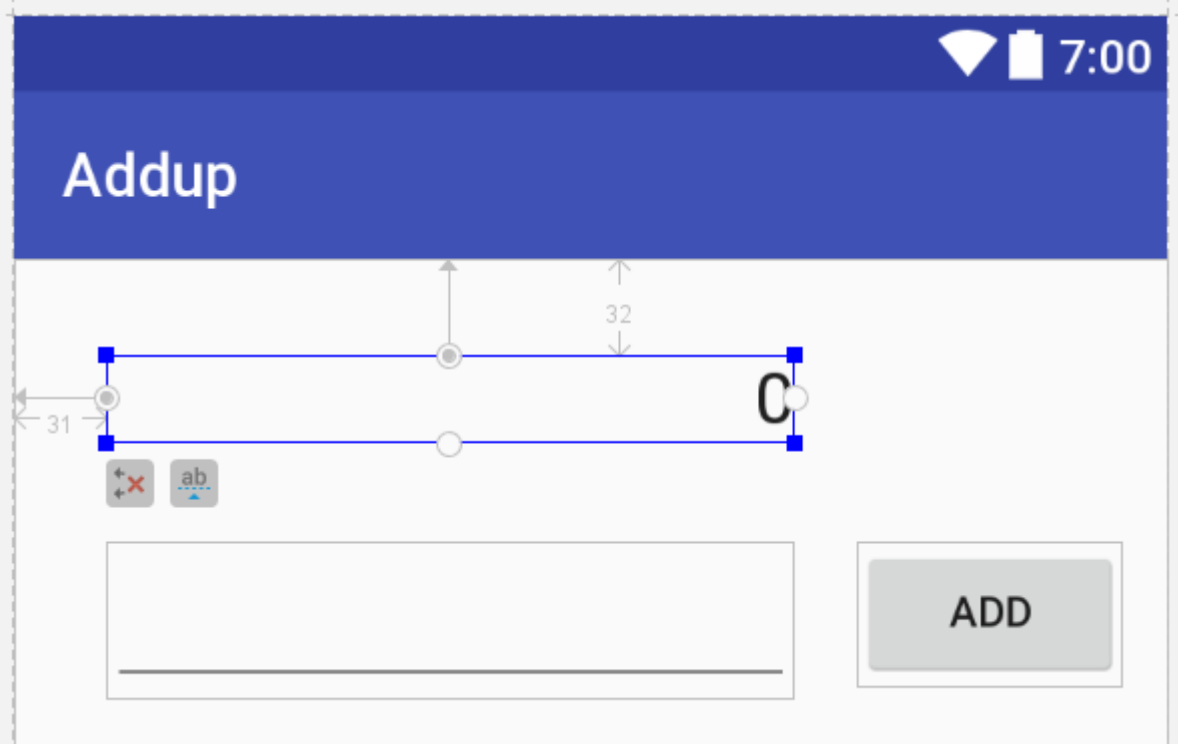
Editable
(not text)

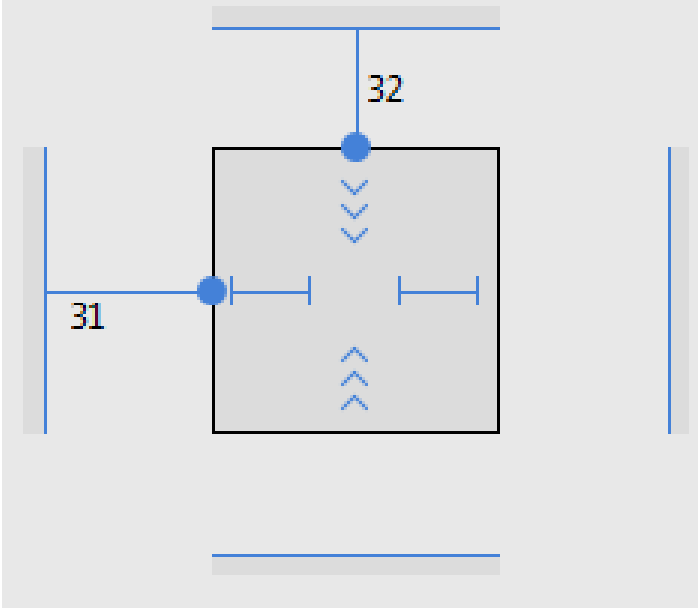
get “text string”
from EditText

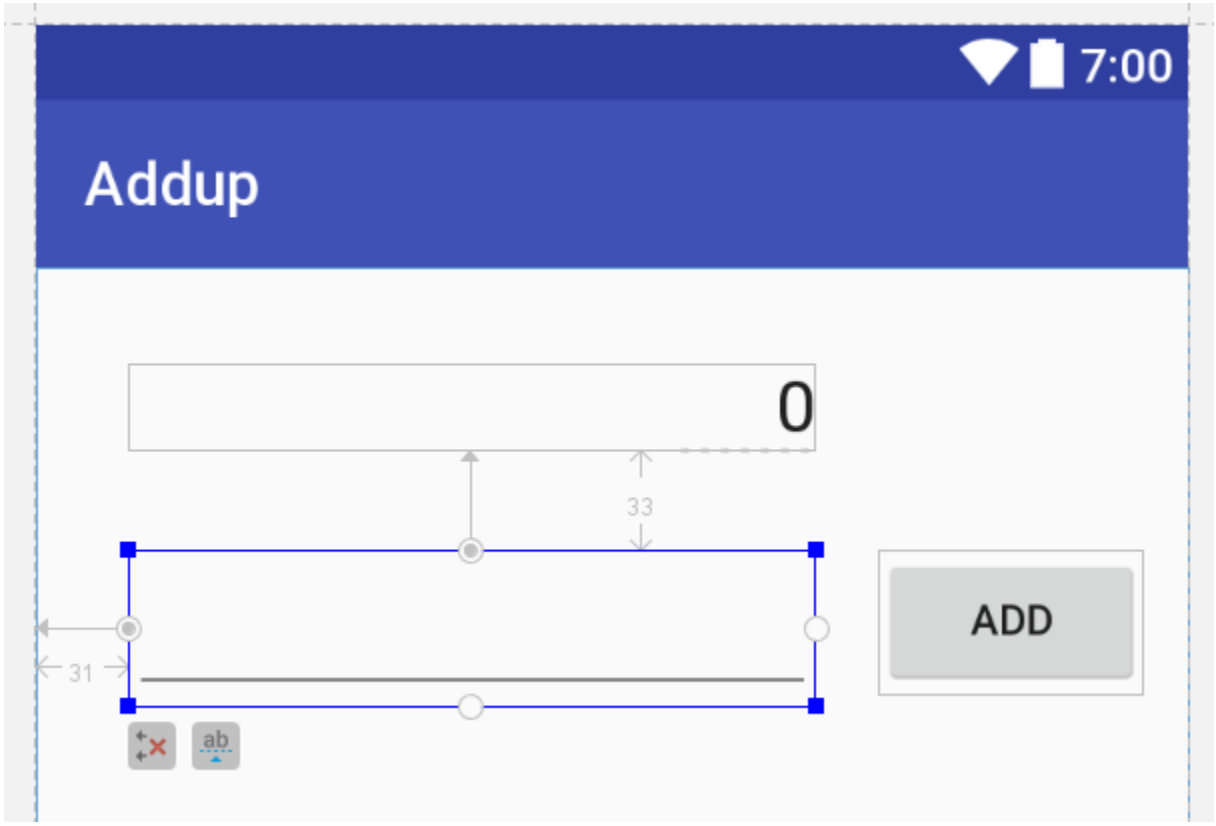
text to Integer

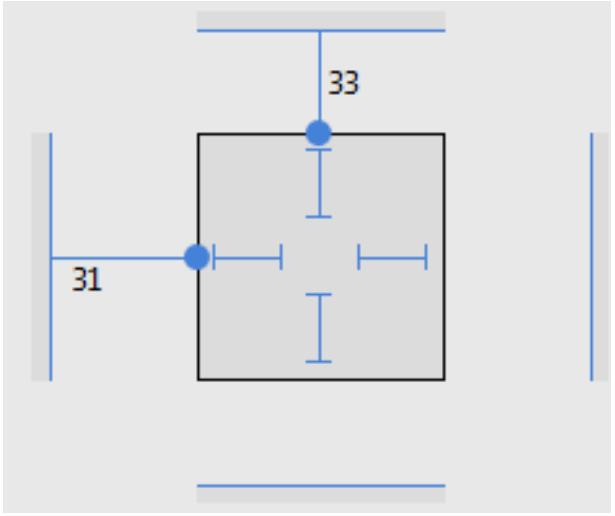


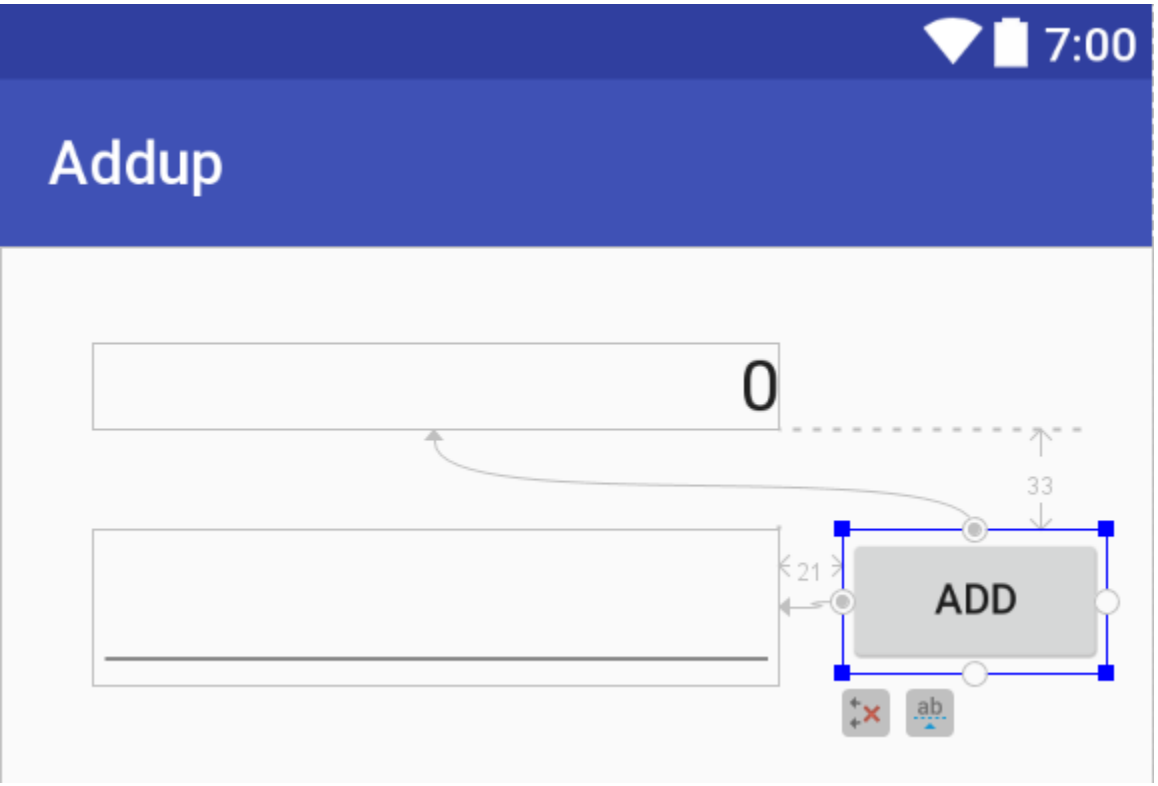
Manual relative layout

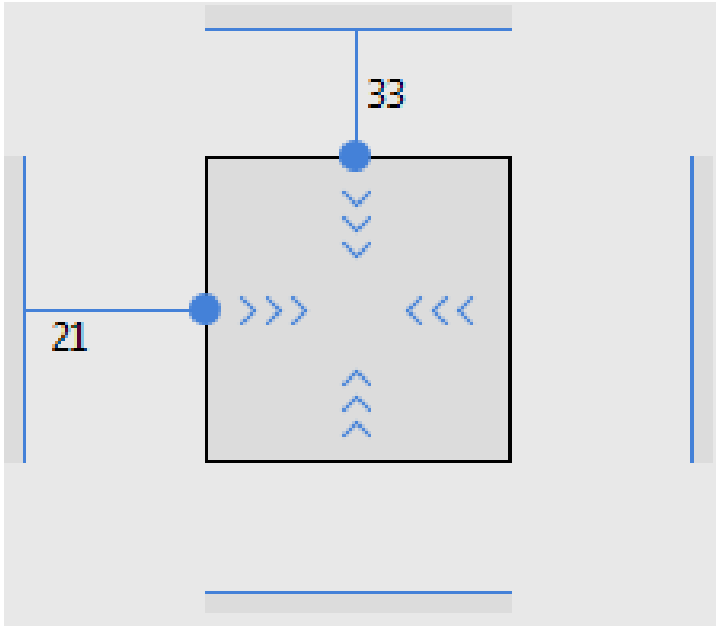
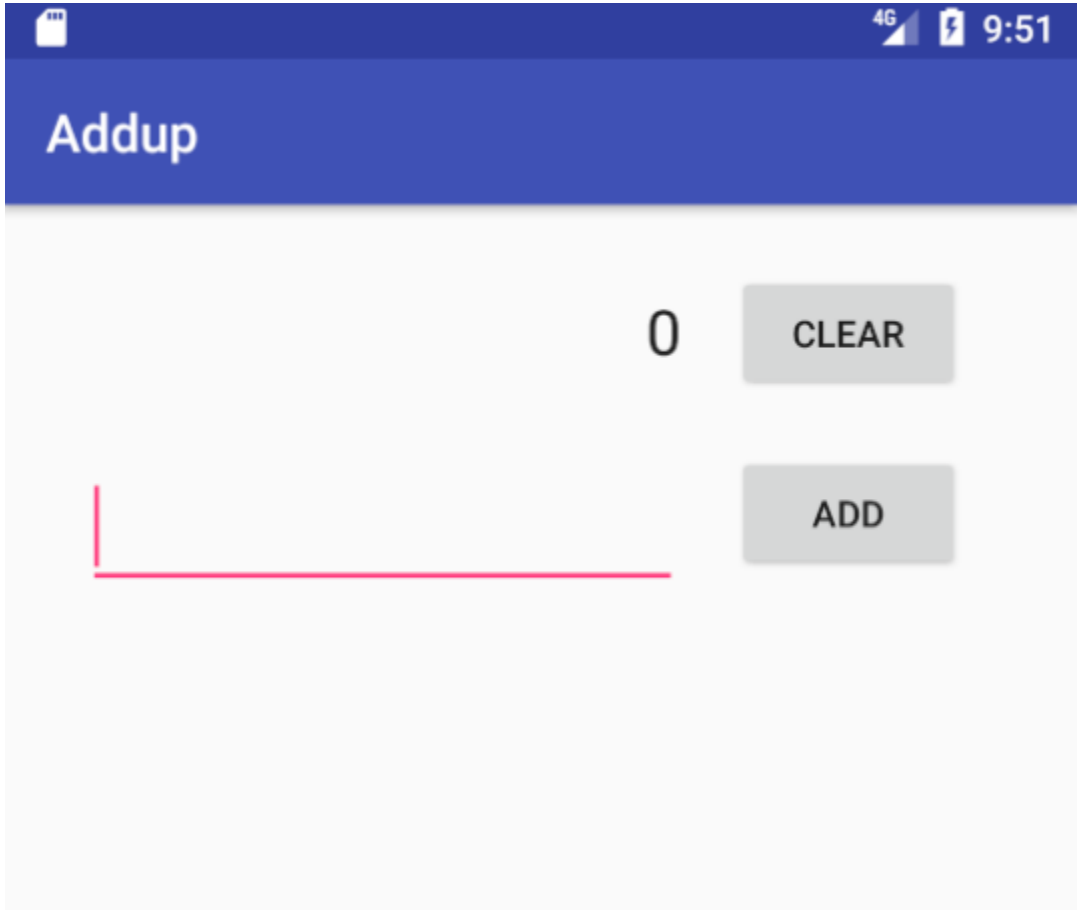





7:00
Addup
0
33
31
ADD
ab


33
31


7:00
Addup
0
33
21
ADD
ab


33
21

(5) Add “CLEAR” button