Layout grids

Theory | Practice | 0% completed, 0 problems solved

Theory

9 minutes reading

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Any application or website interface has a structure that provides convenience for development and the familiar arrangement of elements on the screen for the user. In this topic, you will learn how this structure works and find out more about why it's needed.

§1. System of rules

Everything has some kind of system of rules. For example, the rules of the road or the rules for using brackets, quotes, and commas in different programming languages. We study this system before we dive into a new area because it gives stability and order. Otherwise, there would be chaos and confusion.

Similarly, when developing the interface design of a service or application, there is a **layout grid** system that sets the rules for placing elements on the user's screen in advance. Why is this important?

As you probably know, people can be a bit lazy. They try to think as little as possible when performing various actions. Some become automated and occur unconsciously. But as soon as a person is faced with something unexpected that goes beyond their usual behavior, stupor and panic can take hold.

Layout grids allow interface developers to create a system for arranging elements in a way that makes it easy for users to interact with content – whether it's information, buttons, or input fields.

§2. What are layout grids?

Simply put, a grid is just a skeleton. It's a layout, a structure, a set of vertical and horizontal lines. Or maybe even a table that can be used as a basis for determining where content elements should be located. Grids allow you to place interface elements on the screen in a convenient and consistent way. They also provide a set of limitations to work within that can help to drive creativity.

Columns are utilized internally by grids for marking up the screen. They also use **margins**, which measure the distance from the edge of the screen. (Usually, nothing is located right at the edge because it's inconvenient for the user to interact with the interface in this area). Lastly, **gutters** are located between columns, providing an easy way to visually separate elements from each other. They can, for example, be used to ensure that buttons don't overlap.

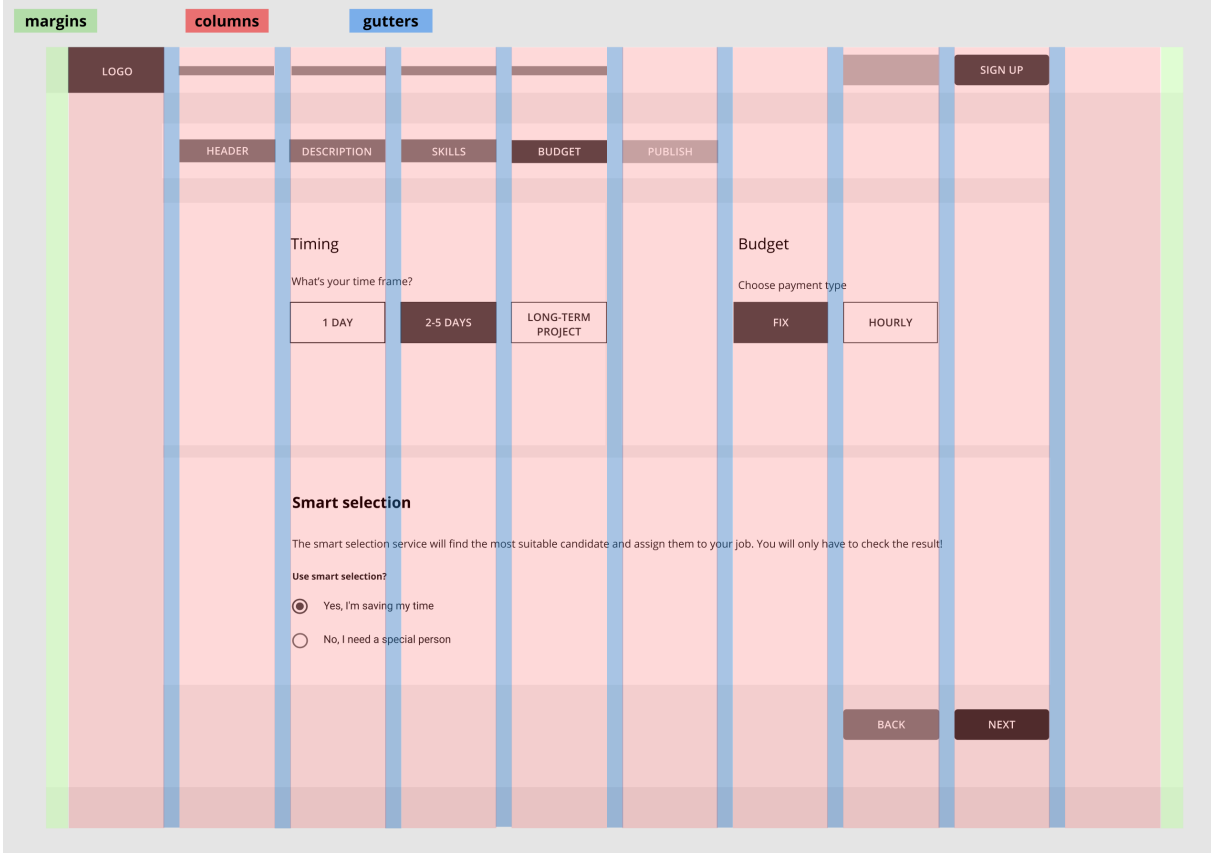
In their work, designers typically set the necessary markup values for these properties in advance. You can see an example in the picture below:

1 required topic

✓ Introduction to UI/UX

5 dependent topics

- Introduction to Flexbox
- Linear, Frame, Relative layouts
- Interface elements
- Layout managers
- Layout elements



Different screens types (mobile devices, tablets, laptops, full-HD monitors) require particular markup values. This is because their differing screen resolutions can make specific layouts more convenient to interact with.

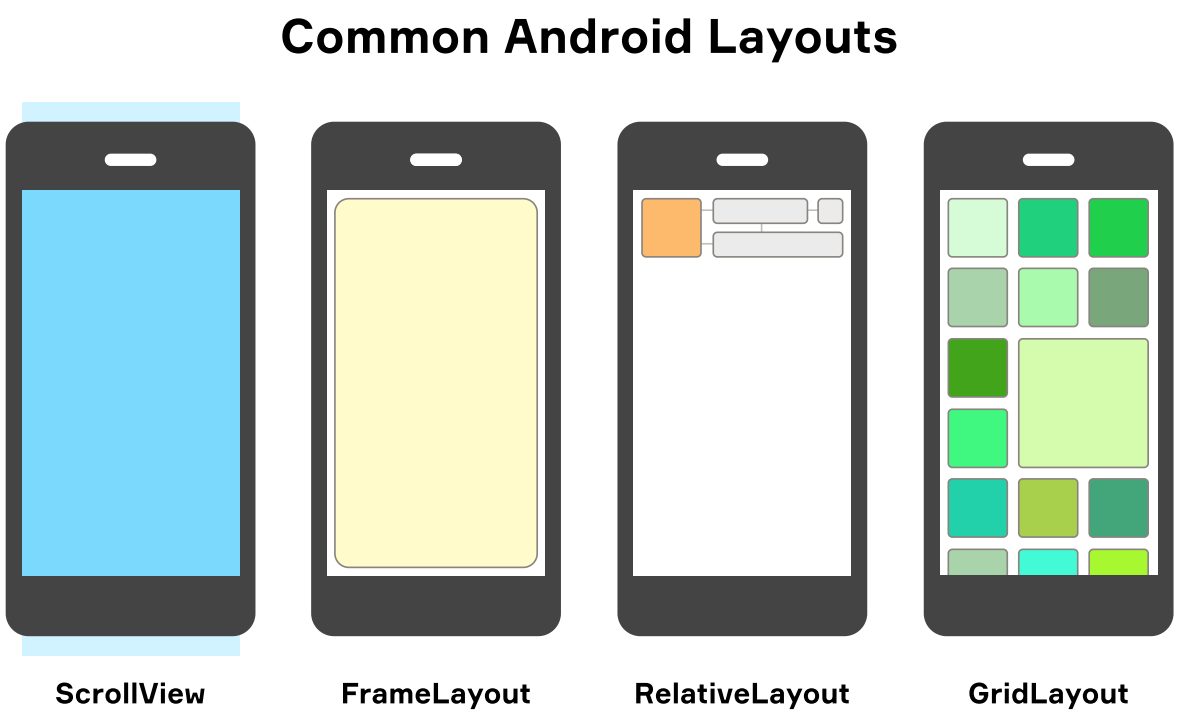
For example, you might be able to comfortably place eight store products on a single line on a computer screen. But only six will fit on a tablet or four on a mobile phone.

Some layouts do require the same number of elements on each screen type. Calculator app is an example. In this case, all controls are located in the same way to look as familiar as possible.

Grids can either be symmetrical or asymmetrical. Symmetric grids are used almost everywhere, while asymmetry is sometimes utilized to impress the user in beautiful design projects.

§3. Layout grid views

There are a variety of layout grid templates that are often used when developing and designing. These have the advantage of being convenient to program with because ready-made libraries and elements are written for them. Specific templates are also familiar to users when viewing a particular type of content.



These layouts each have unique properties that allow you to control the content on the screen in different ways. For example, ScrollView is used in blogs or e-book applications because it enables content to scroll down. While GridLayout does a great job of displaying online store product cards.

You can read more about layouts in the Android Developers docs.

§4. Conclusion

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Any design should have limitations. If you give yourself endless scope for your imagination, you can get stuck for ages trying to come up with the arrangement of the elements. Today you learned that:

- Layout grids make it easier for developers to create applications.
- When developing interfaces, you need to think carefully about the size of the margins and the distance between elements.
- You can create any layout, but there are also popular ready-made templates for different purposes available.
- Users expect a similar visual structure from some applications, so it's often better to use a familiar layout instead of a unique one.

Discussion