THE UNIVERSITY OF HONG KONG
FACULTY OF SCIENCE

Science Communication YouTuber Challenge
Everyday Science Hackathon
Tutorial on designing a mobile app interface

We are going to learn how to use **Figma** to design a mobile app interface for your entries. The finished design can be included in: 1) **Section 2 of your proposal for the first-round selection**, and 2) **the final video submitted for the second-round selection** (if appropriate).

Let's use the following example to design a mobile app interface.

Problem Statement
Fast fashion in Hong Kong contributes significantly to environmental degradation and consumer waste, creating a need for sustainable fashion solutions that resonate with the city's fashion-conscious population.

App Concept: A GenAI-Powered Sustainable Fashion App called "StyleCycle"

Purpose: "StyleCycle" aims to reduce fast fashion's impact by promoting sustainable wardrobe choices among Hong Kong's fashion-forward population.

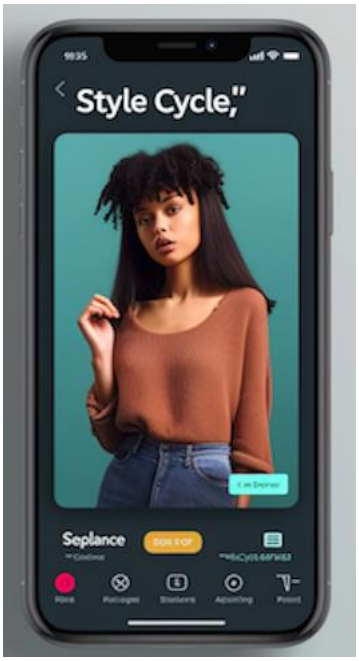
GenAI Integration: Leveraging GenAI, the app can offer personalised wardrobe suggestions by mixing and matching existing pieces, provide virtual fittings for second-hand clothing, and generate eco-friendly fashion trends based on user preferences and sustainable fashion data.

What kind of creative elements would you consider to be in the application?
The app could feature a GenAI-driven marketplace for exchanging and upcycling clothing, as well as a fashion assistant that helps users create new looks from old garments, encouraging a shift from buying new to reimagining existing.

Investor Appeal?
The app responds to the rising global demand for sustainability, particularly in the context of fashion in a densely populated city. It presents a marketable opportunity to foster eco-conscious consumer behaviour while tapping into the lucrative fashion industry.

Step 1: Prepare render illustrations

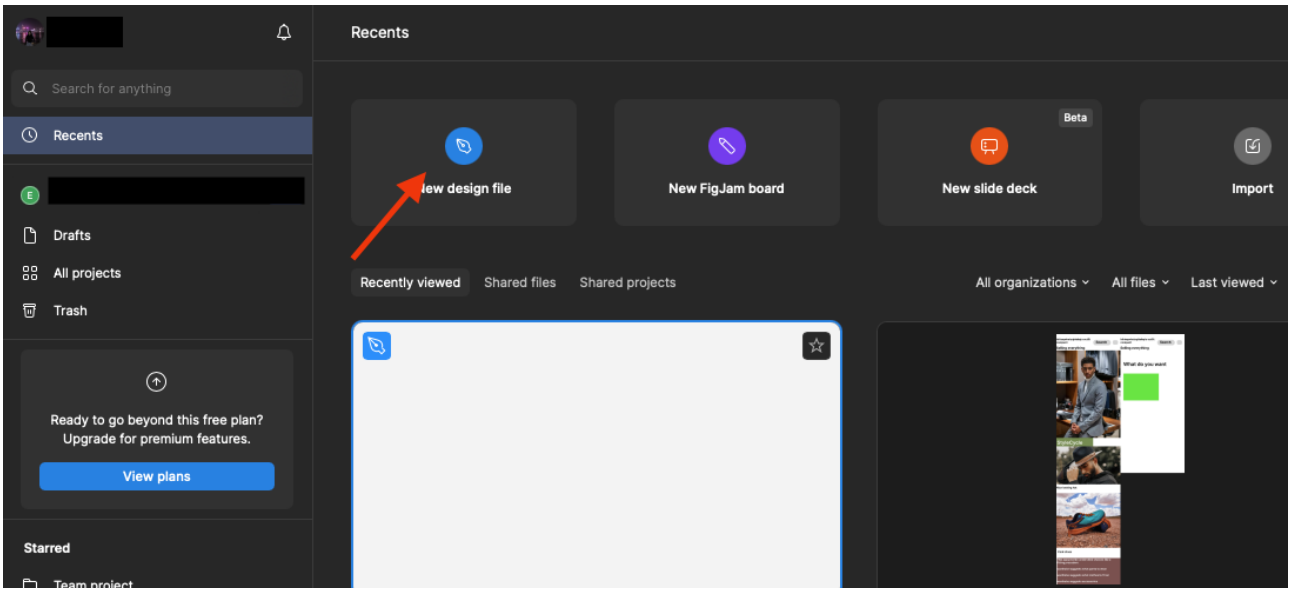
Render illustrations generated by generative AI (e.g., Midjourney) will be used to provide the basis of the layout of your mobile app.



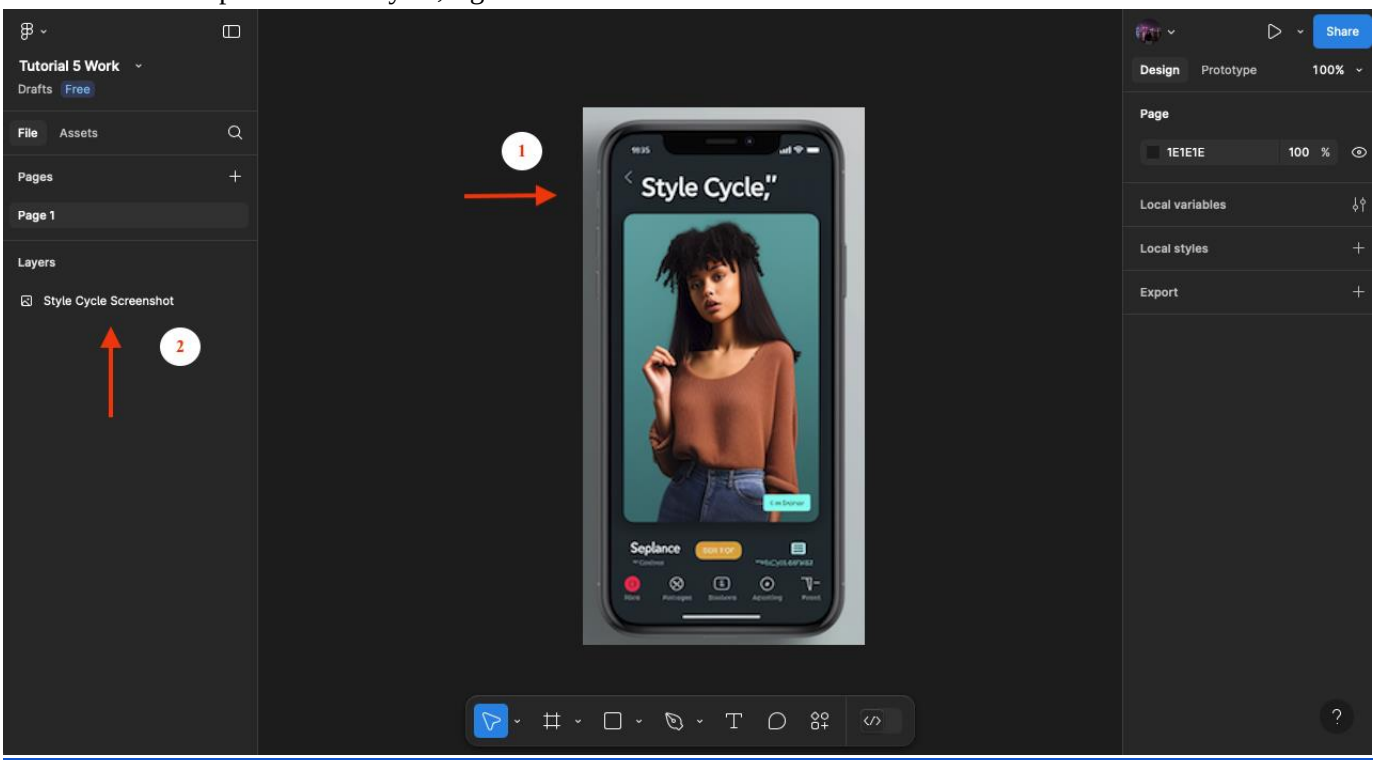
Step 2: Using Figma to develop a wireframe and mock-up of the application

Main Task: To use Figma to develop a wireframe and mock-up of other elements (e.g., text or hand drawn designs)

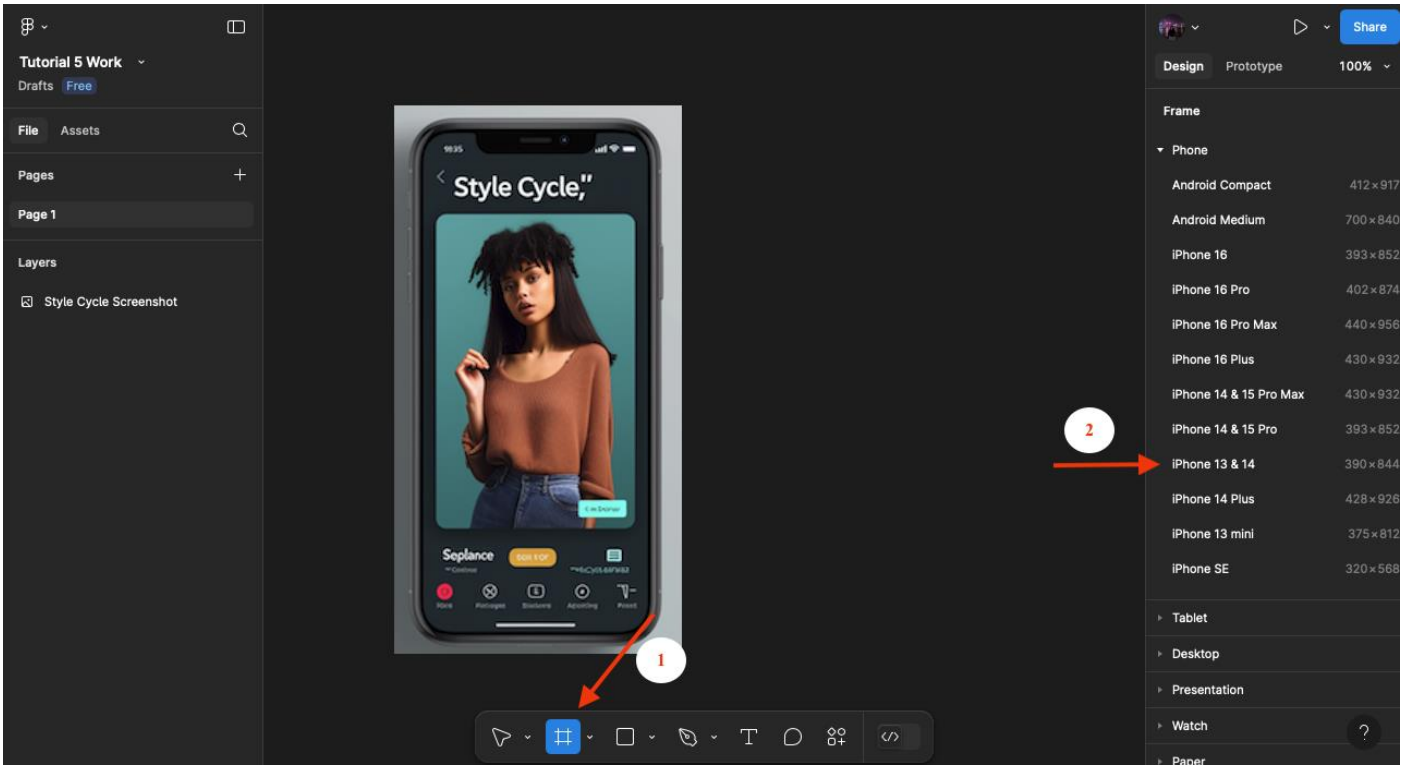
1. Register for **Figma** by clicking on the link below [(https://www.figma.com/files/recents-and-sharing?fuid=1339493169185841513)](https://www.figma.com/files/recents-and-sharing?fuid=1339493169185841513)
2. Create a new 'Design File' and name it.



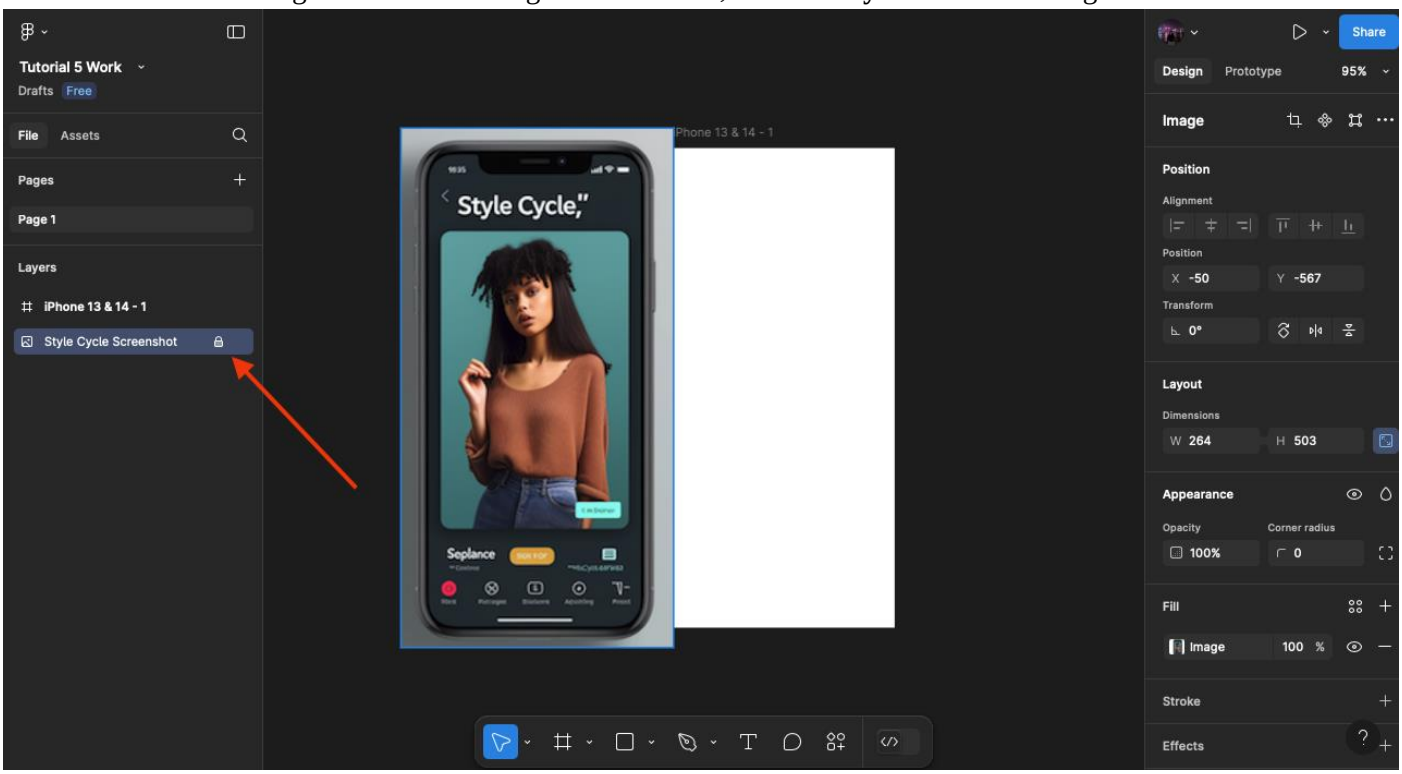
3. (1) Drag in the downloaded illustration of the rendered mobile application from your files. (2) Then, on the left-hand side panel called layers, right click and rename the file.



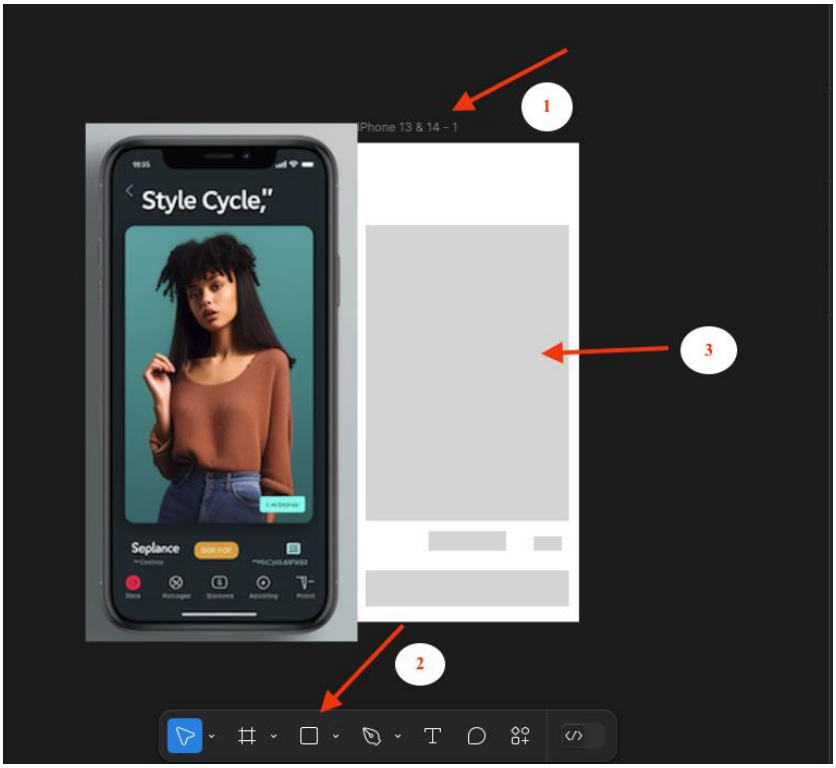
4. (1) Add a frame by click  and then, (2) on the right panel under ‘design’, select your desired frame size. This is now called a **wireframe.**



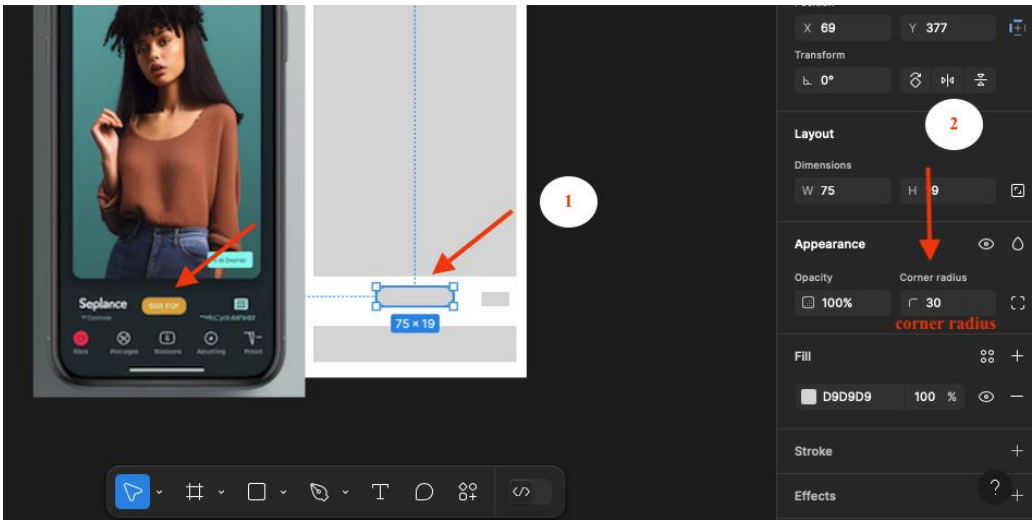
5. Move the illustration so that it is side by side with the wireframe and adjust it by holding onto the ‘shift key’ to resize the image while maintaining the ratio. Then, **lock the layer** so that the image will not move.



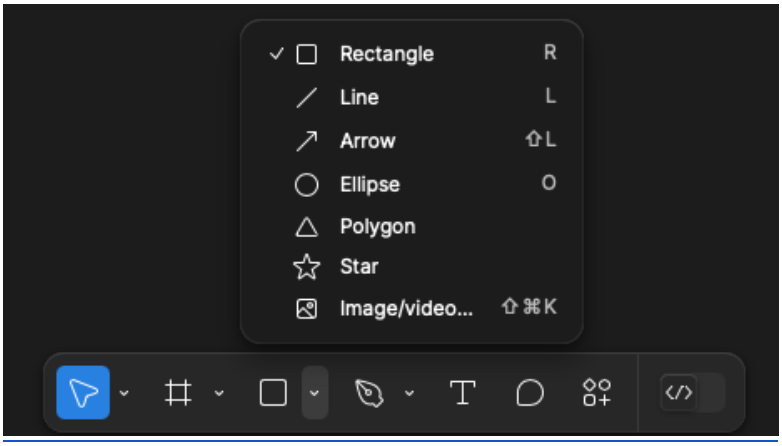
6. Now to recreate the elements that we see on the illustration. (1) First, select the iPhone wireframe title and (2) then click  to create a ‘rectangle’ element within the wireframe to represent the images seen on the illustration. (3) Also use a rectangle to represent everything on the image that is not a text. Adjust the size accordingly using the blue edge of the rectangle.



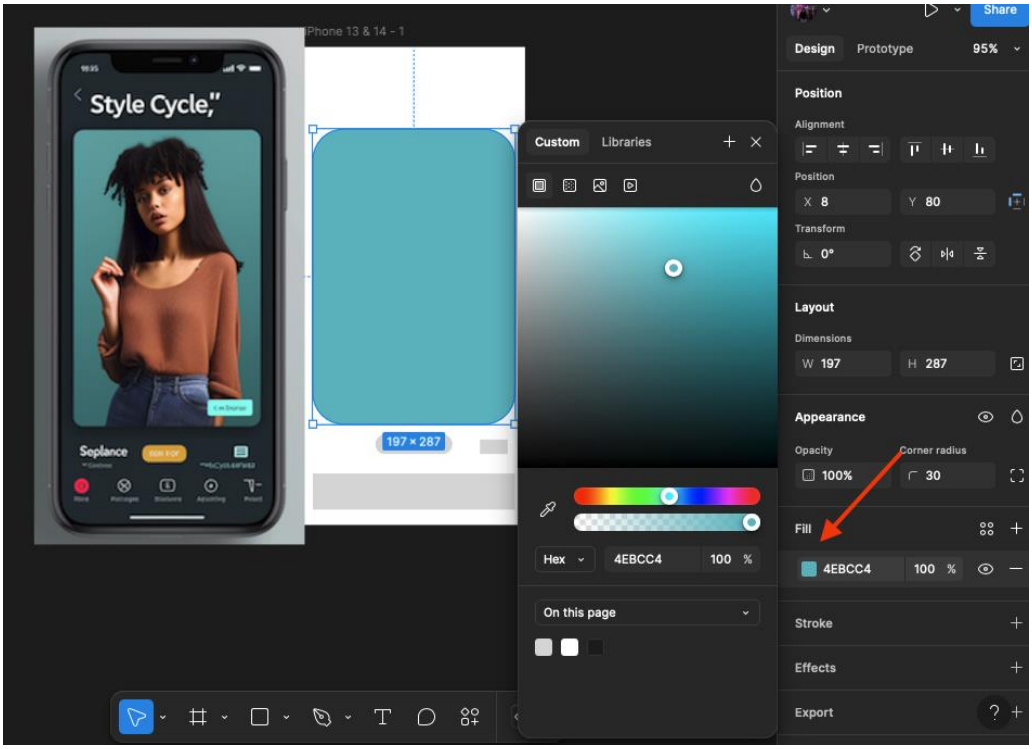
7. If a rectangle needs to have curved corners, (1) simply select it and (2) adjust it via the corner radius.



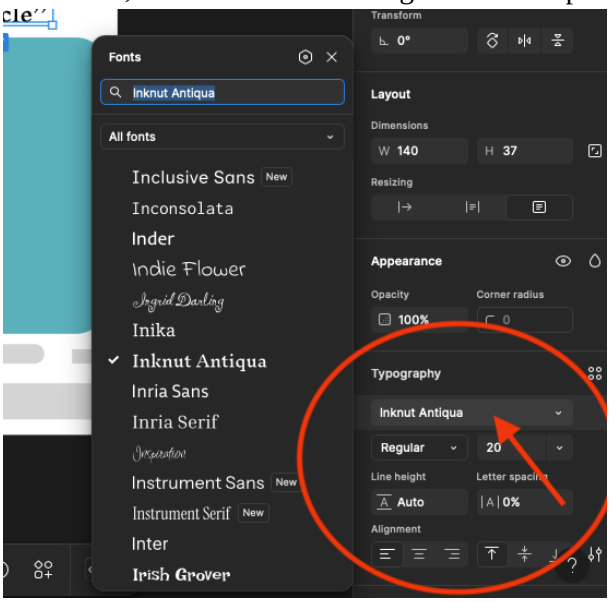
8. If you need other elements like a circle, a line or an arrow - select the tool using the dropdown.



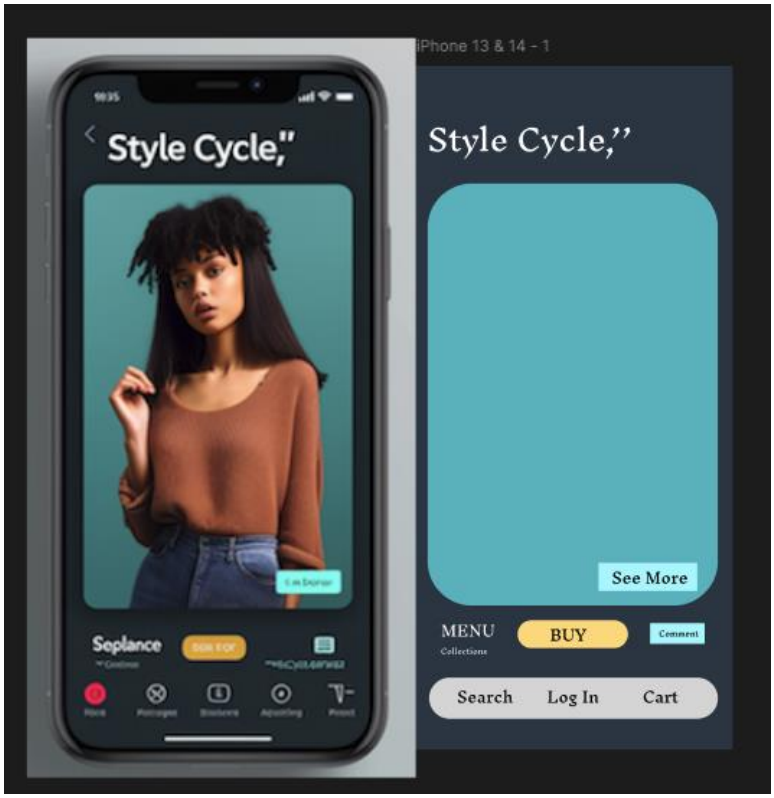
9. Since the rectangles are all grey in colour by default, fill in random colours to each other to make them distinct from each other.



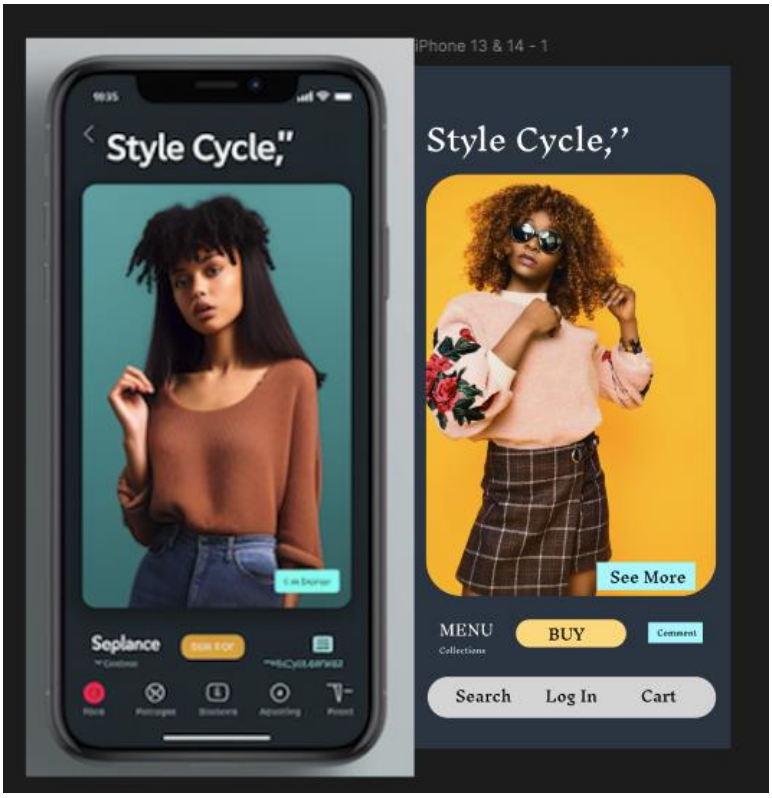
10. Now, it's time to put in the text. Simply click on the T icon and then write the text of the image onto your wireframe. Play around with the font, bold and size on the right-hand side panel.



11. Add in all your texts and it should look like this.



12. Now is the time to create your **mock up** with images. First, open the image file on your computer then press ‘control c’ and then go back into your Figma design, click on the ‘rectangle’ element where you want the picture to be inserted, and press ‘control v’. Your desired image should automatically fit into the element you selected.
    a. You may use www.pexels.com to find high-resolution stock images for free.



Step 3: Developing the Prototype

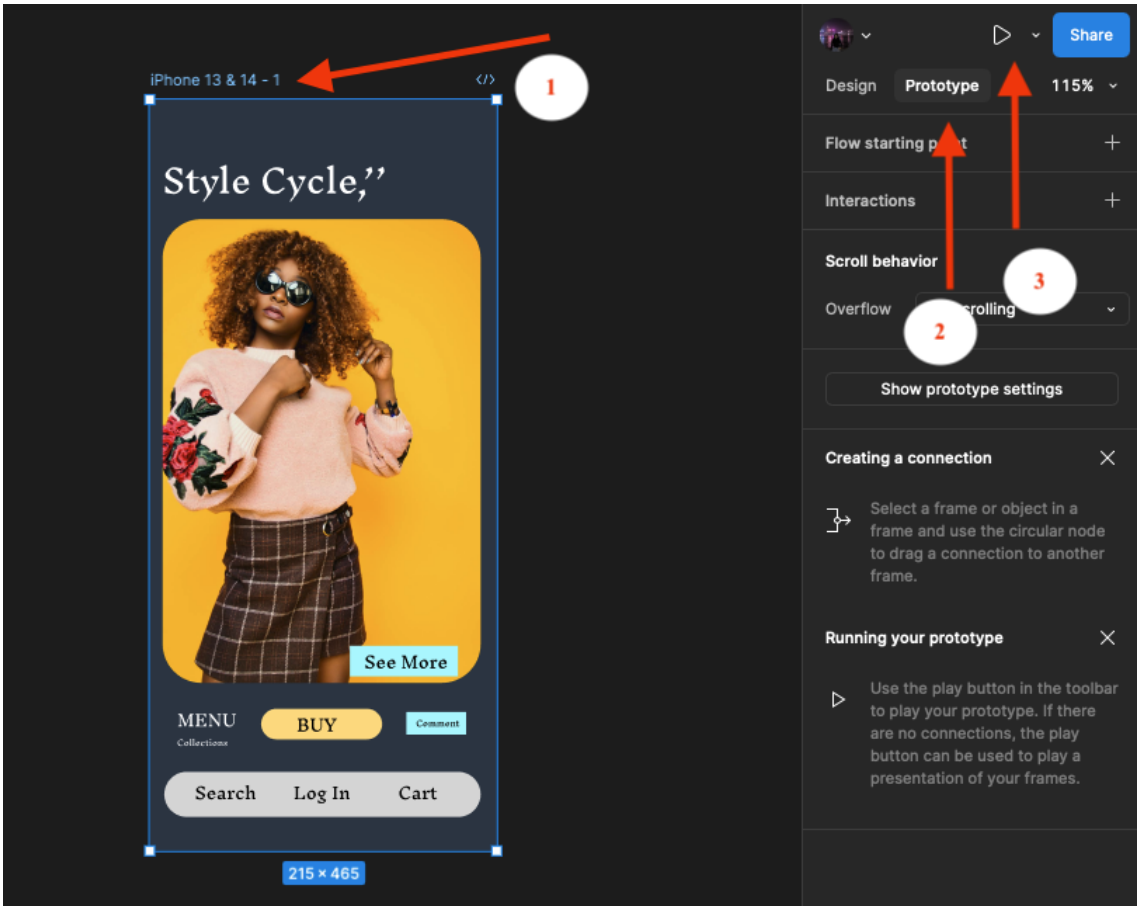
Main Task: To use Figma to produce the mobile application prototype. This includes the development of the interactive features and basic format of the application for users.

Prototype viewing screen

In Figma, a prototype viewing screen refers to the interface where you can interact with and navigate through your prototype as if it were a live product. When you switch to the prototype viewing mode in Figma, you are essentially previewing how the design would function in real life, including transitions, animations, and interactions between different screens or components.

1. To set up this prototype viewing screen, (1) start by selecting the wireframe title, (2) then click ‘prototype’ (3) followed by the ‘play’ button that drops down and select 

. This will open the viewing page on another tab.



Now, no matter what changes you make on the Figma wireframe, you will be able to immediately see the changes on the prototype viewing screen.

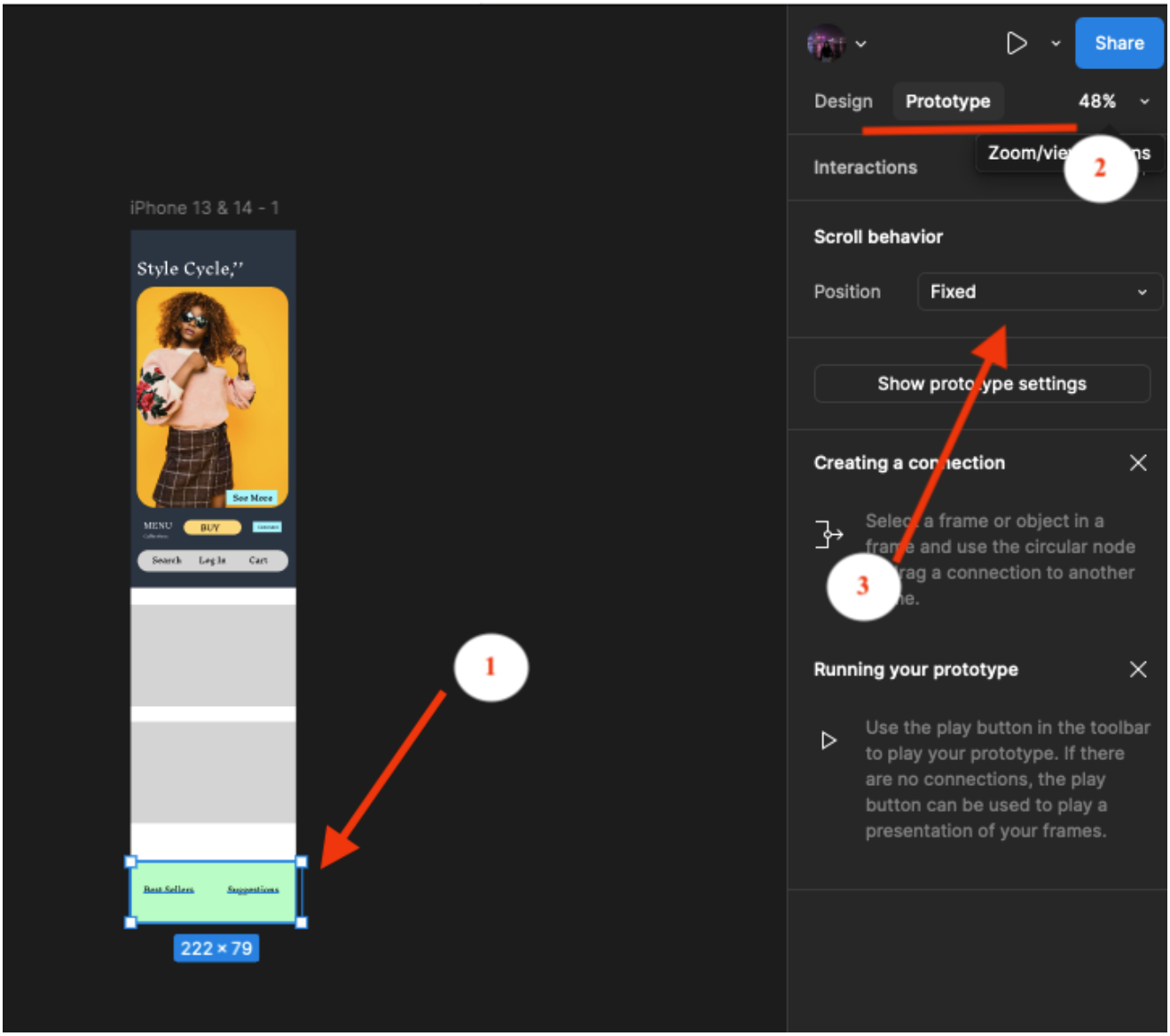
In Figma, you can also create specific functionalities within the design for your mobile application. For example, you can create page-level vertical scroll, component level horizontal scroll, or cross pages interactions. More will be explained below.

Page-level vertical scroll

This allows entire pages within a Figma design to have vertical scrolling. It's useful for designing long pages like feed screens, where the content extends beyond the viewing height. Essentially, you can simulate the natural scrolling experience as seen in web browsers or mobile apps.

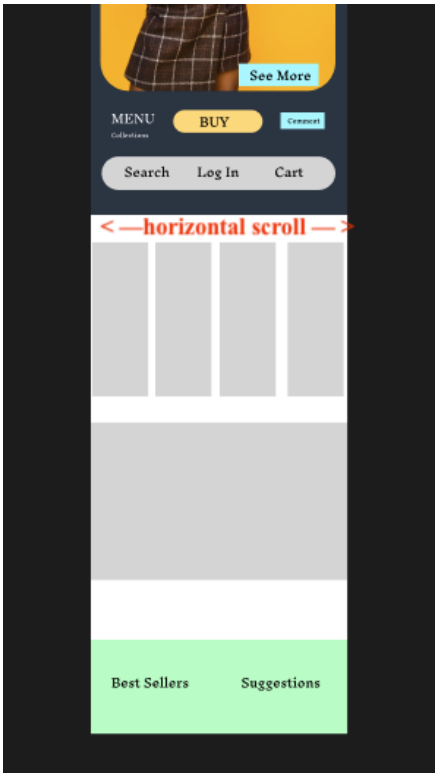
2. Now let’s create a **page-level vertical scroll.** First, select the border of the wireframe and then extend the length of the frame from the bottom. Select the bottom element (which is your footer) and drag it to the bottom of the frame. Then, fill in more elements in between according to how you want the ‘home-page’ to look like.

3. (1) Press the ‘control’ key and select all the elements of the footer. (2) Under prototype, and next to ‘position’, (3) select ‘Fixed (stay in place)’. Repeat the step with the header.
    a. Now in your ‘prototype viewing screen’ you will be able to see that the header and footer are fixed in place whilst you scroll vertically.

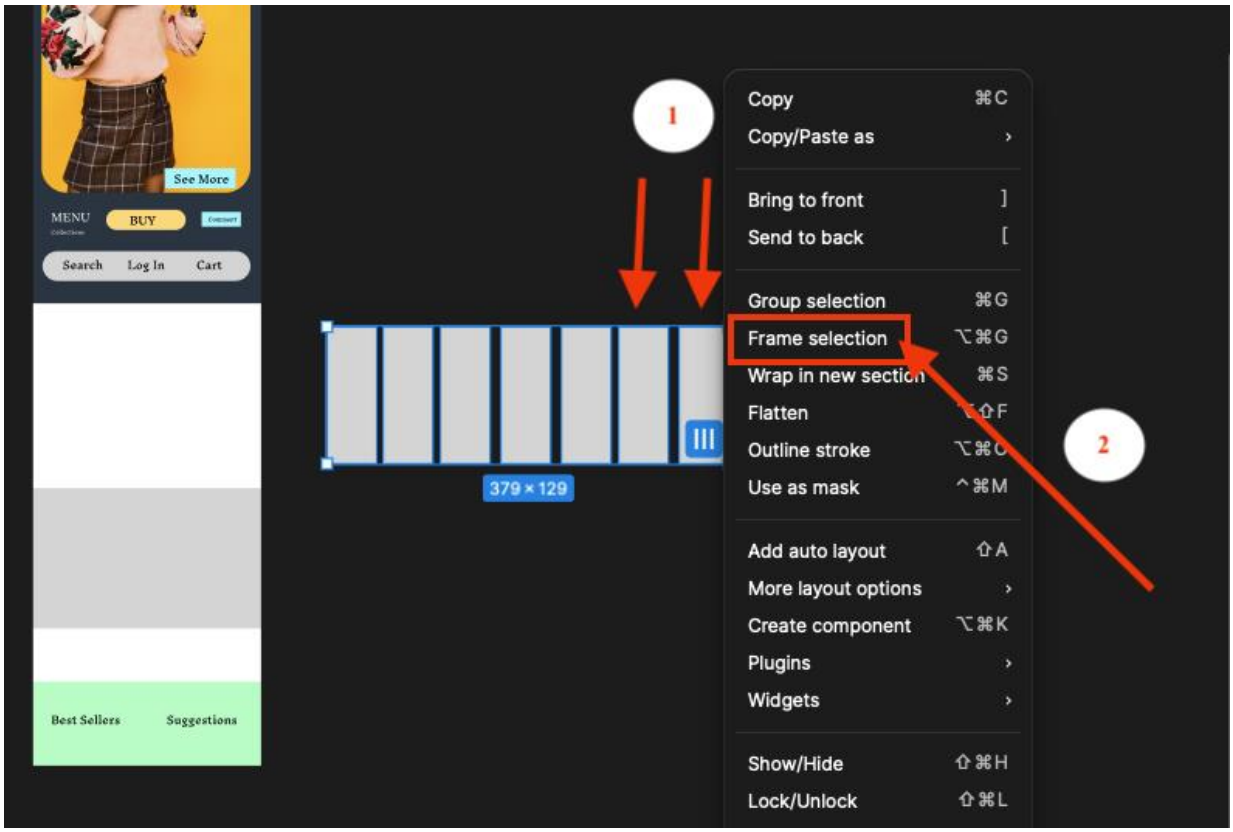


Component-level horizontal scroll

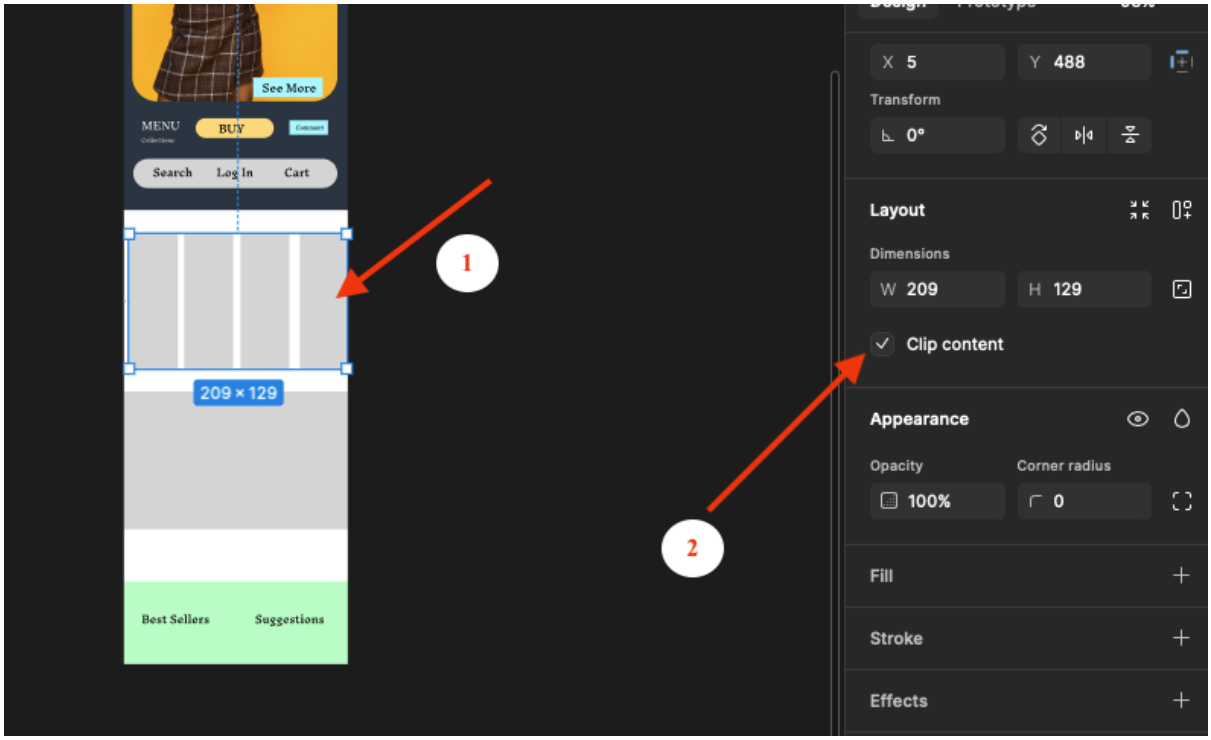
This feature enables individual components or groups within a Figma design to scroll horizontally. It's particularly useful for creating scrollable elements like carousels, galleries, or a row of cards within a page. This allows for more complex and interactive designs where not everything on the screen moves at the same pace or direction.



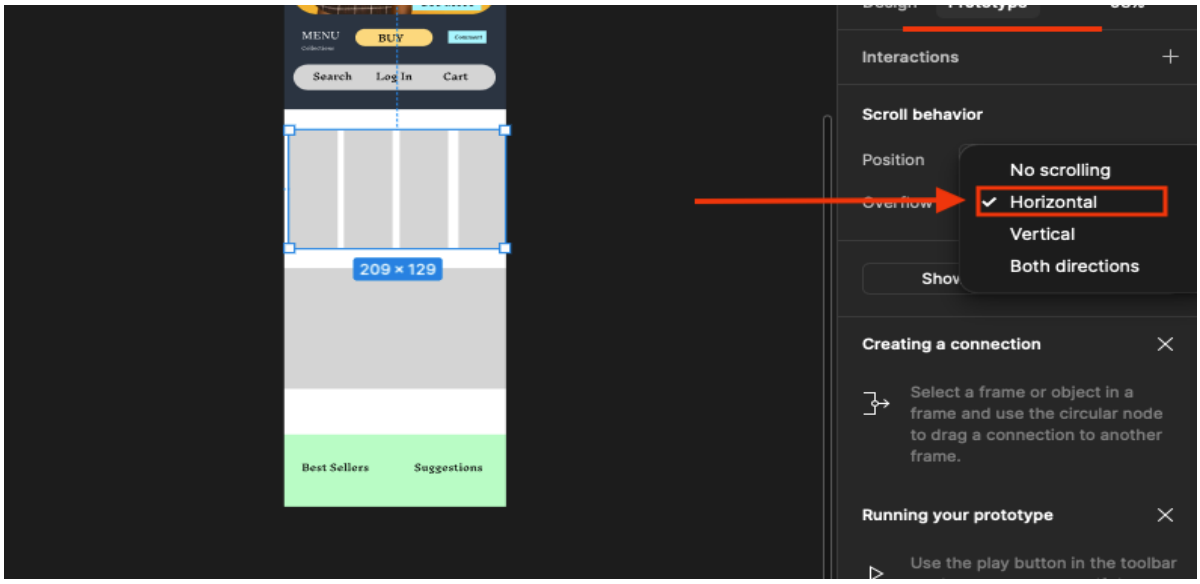
4. Now let's create **component-level horizontal scroll.** (1) First, duplicate the elements until the desired quantity for the horizontal scroll. Then select everything by holding on the 'control' key, (2) right click and click 'frame selection'.



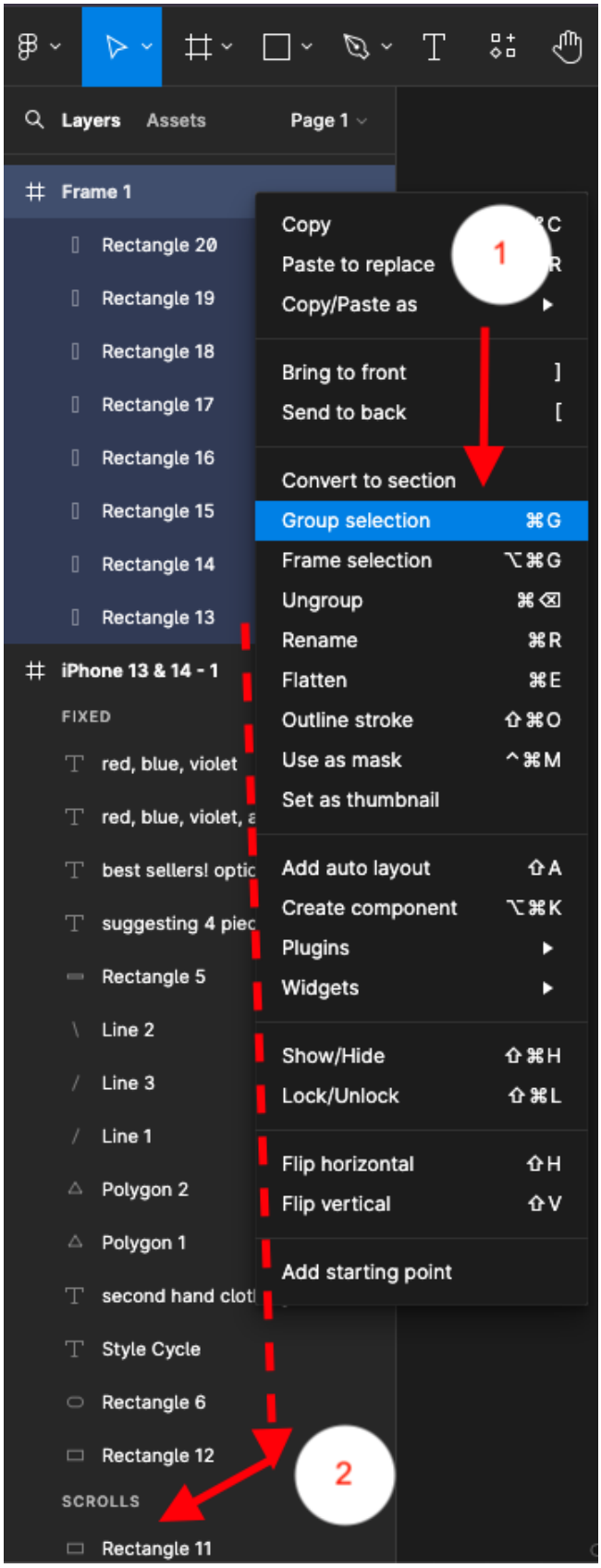
5. (1) Drag the wireframe border from the right-hand side to the desired placement on the main page. (2) Then click ‘clip content’.



6. Then click ‘prototype’ and under ‘overflow’ drop down the menu and click ‘horizontal.



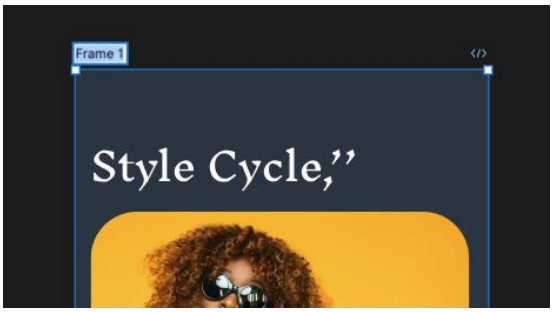
7. Then (1) select all the elements that make up that frame on the left-hand side panel, and right click and select ‘group selection’. (2) Then drag the group under ‘scrolls’. Now if you go to the viewing screen of your prototype, you will be able to scroll your elements horizontally.

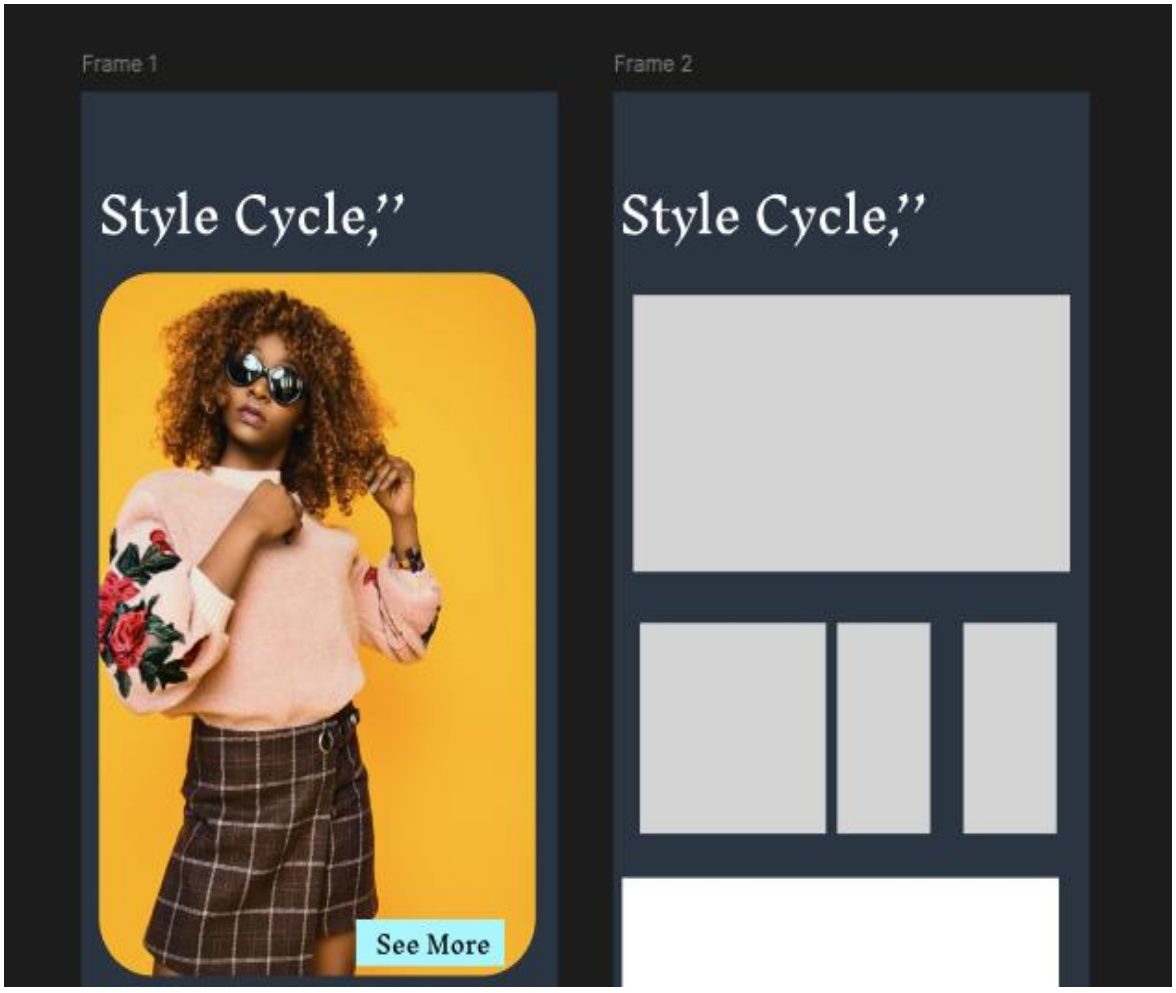


Cross Frames Interactions

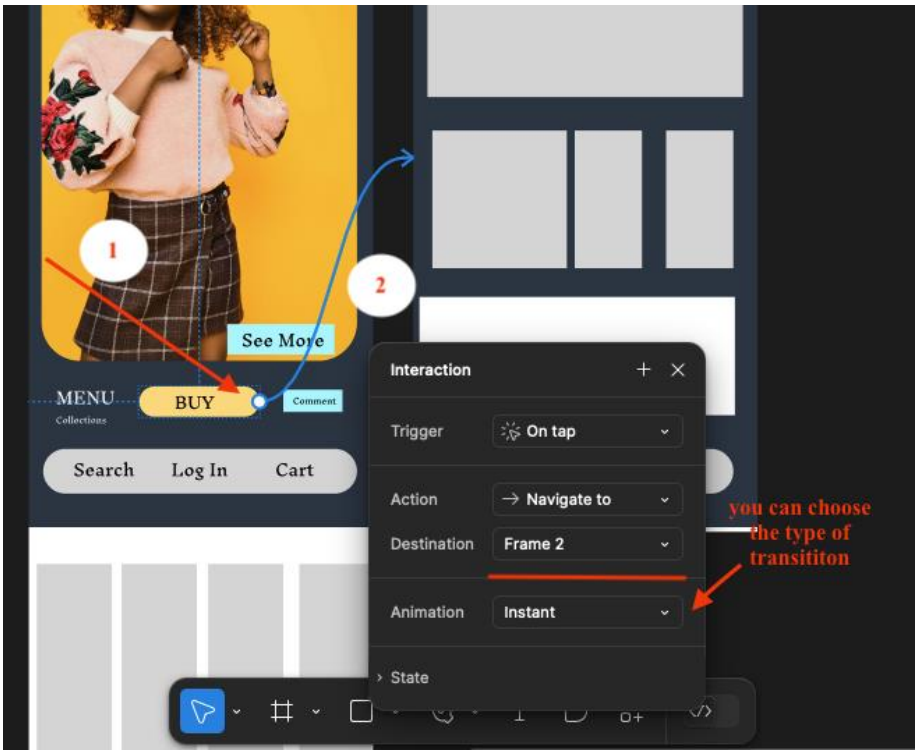
This refers to the ability to create interactions that link different frames in a Figma design. It allows designers to simulate a real app or website experience by navigating from one frame to another through user interactions like clicks or taps. This is crucial for demonstrating the flow between different screens or states in a product design.

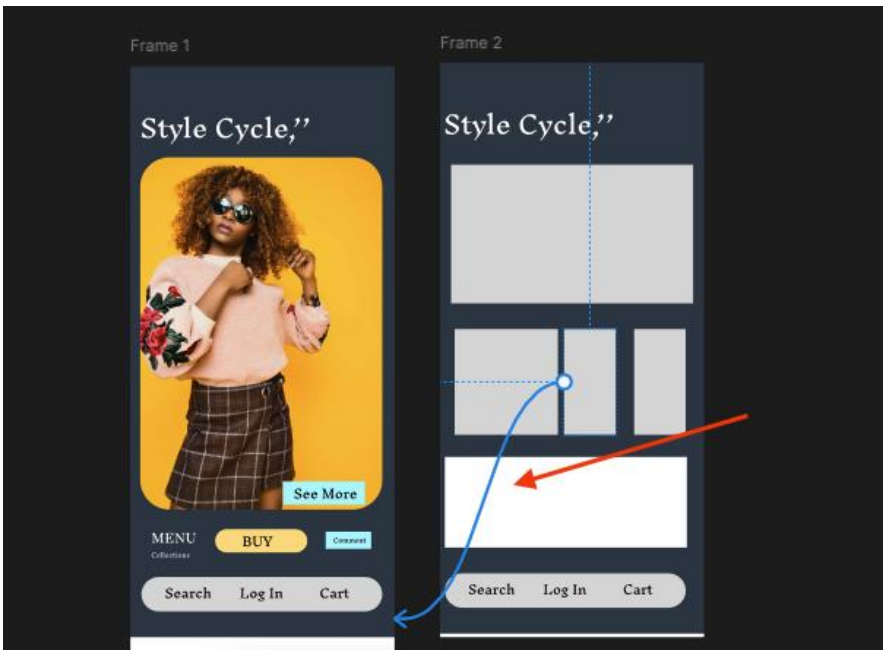
8. Now let's create **cross frames interactions.** First, double click on the title for the wireframe and name it 'frame 1' then hit copy and paste and the same wireframe would appear as 'frame 2'. Decorate your 'frame 2' according to what you want to show with elements and text. On the prototype viewing screen, you will be able to interchange and see frame 1 and frame 2. However, they are still disconnected.



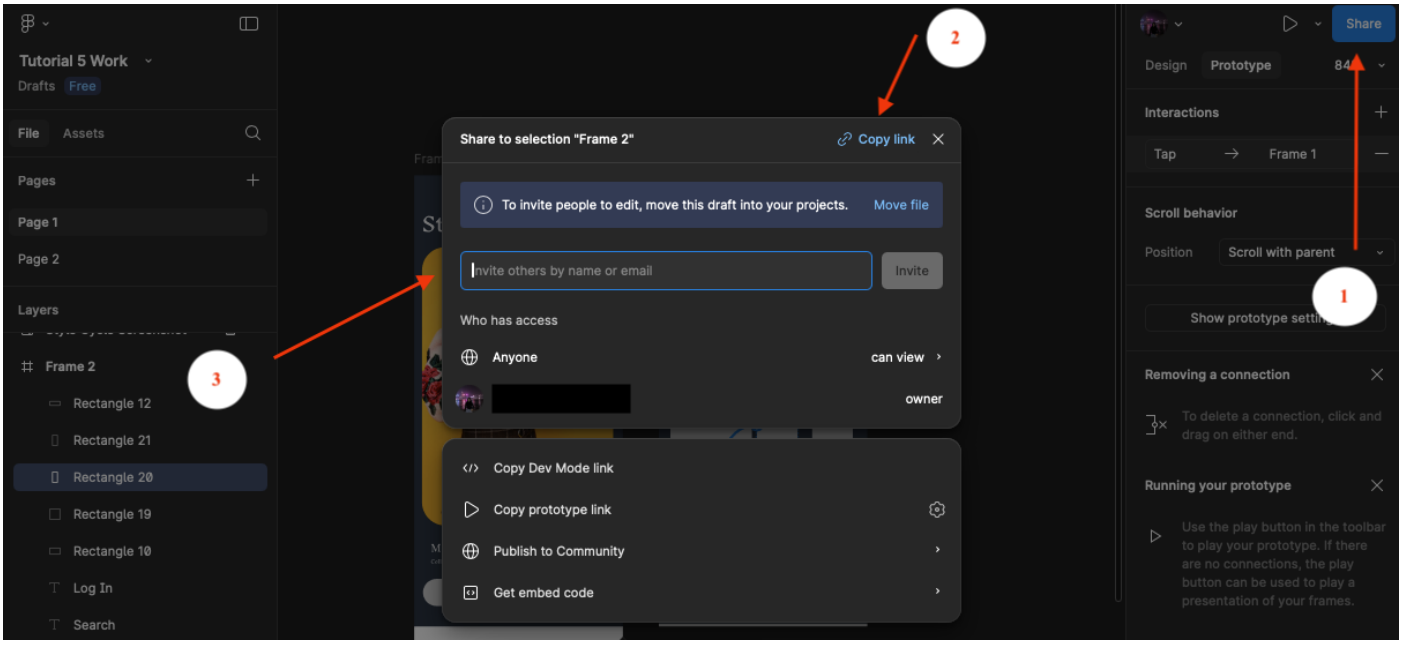


9. To connect both frames, which is called a *navigation interaction*, begin by selecting the object or frame in your Figma design that you want to trigger the navigation interaction. (1) Upon selection, look for the  button, which appears as a small, circular dot near the object or frame's boundary. (2) Click and hold this  button, then drag it towards the destination frame you wish to navigate to; as you drag, you'll see a connecting light blue line indicating the path of your interaction.
    a. So, now when the user clicks on the element on the prototype viewing page, they will be directed to the other page as directed. Vice versa, you can select the  from any element from frame 2 and drag it to connect to any element in frame 1. Like this, the user can be taken back to frame 1 after clicking on the element, creating a seamless navigation experience within your prototype.





10. Time to share with your tutor, friends, and family! (1) Go to the prototype viewing screen and on the top right-hand corner, hit ‘share prototype’ and you can (2) ‘copy the link’ and share to them or (3) send a link via email. **Please set the access to “Anyone can view”.** When they have received the link, they will be able to interact with your prototype.



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