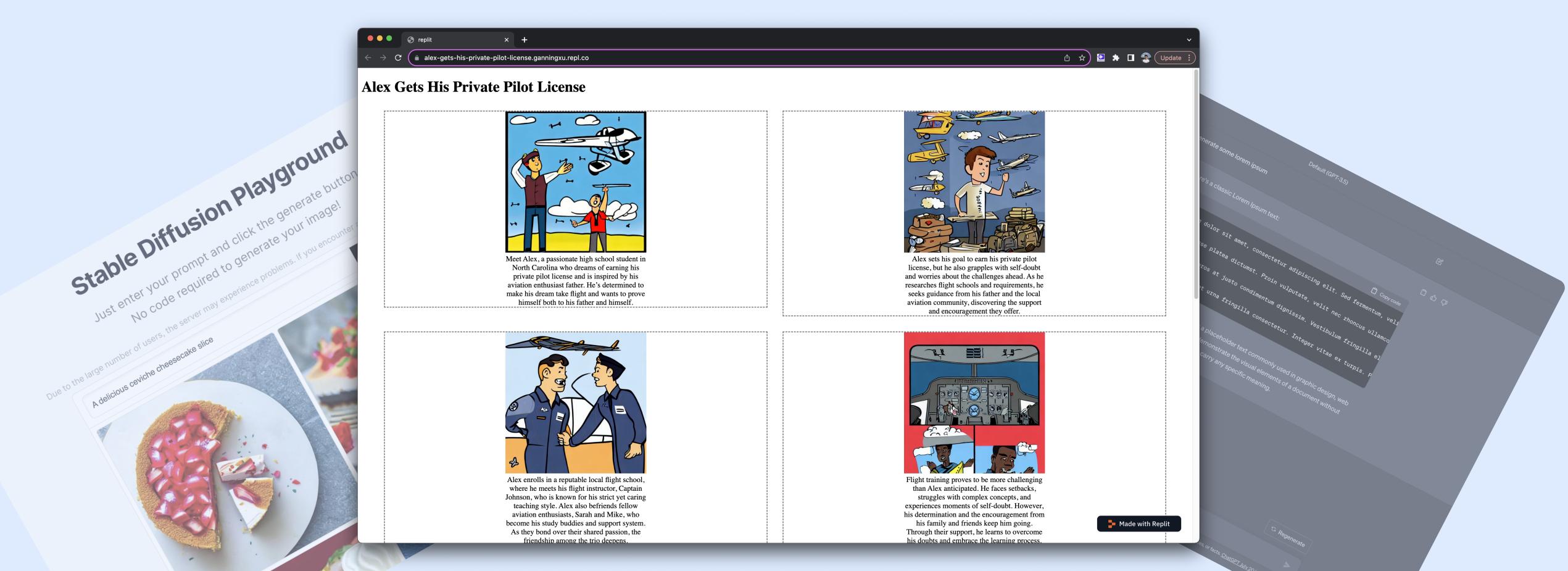
# Create Your Own Comic Book With Al

get a shareable website for your finished comic book

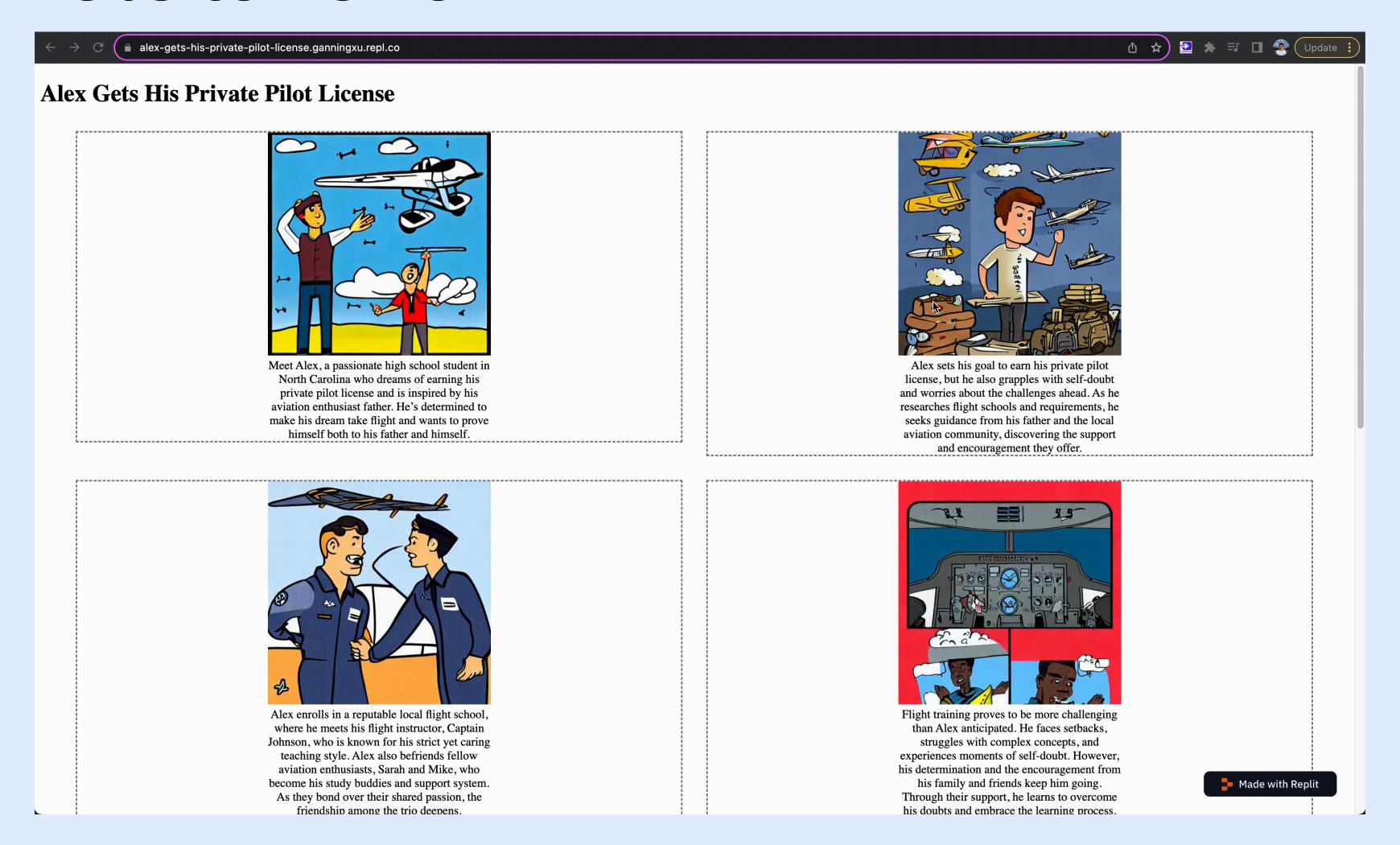


### Today, we will:

- 1. Learn about prompt engineering basics
  - a. DAD JOKE COMPETITION
- 2. Brainstorm a comic topic
- 3. Use ChatGPT to create text for your 8-section comic
- 4. Use Stable Diffusion to generate images
- 5. Deploy everything as a website on replit



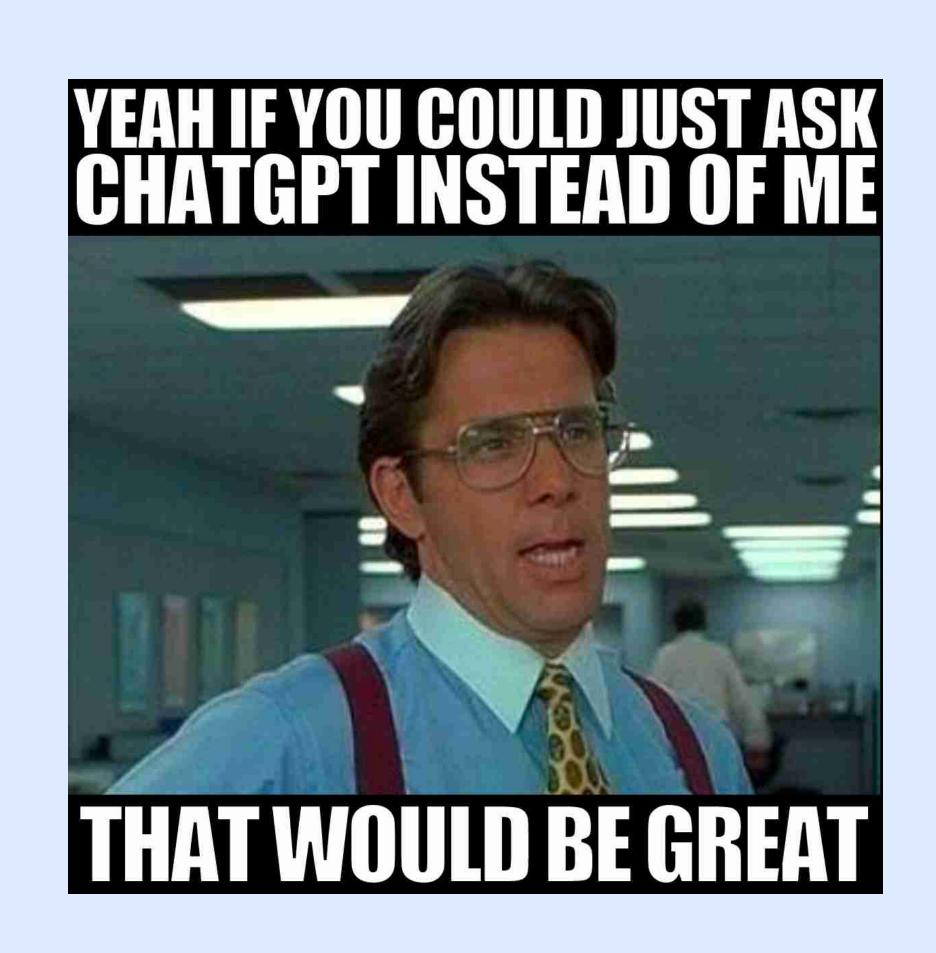
### Finished Website Demo



https://alex-gets-his-private-pilot-license.ganningxu.repl.co

## Prompt Engineering Basics \

- zero-shot prompting
- few-shot prompting
- chain-of-thought prompting
- generated knowledge prompting
- self-refine prompting
- tree-of-thought prompting



### Quick Facts

- Quality of results often depends on how much information the prompt provides, and how well-crafted it is
- A typical prompt will contain the following elements:
  - · Instruction: what you want the model to do
  - Context: what background knowledge you want the model to have
  - Input Data: question that we are interested in the response for
  - Output Indicator: the type/format of the output

### More Quick Facts

- In the "instruction", use specific verbs like "write", "classify", "translate", "summarize", etc
- Be very clear and specific on the task you want the model to perform
  - The more detailed your prompt, the better the answer will be
- Instead of saying what "not to do", tell the model what "to do"

### Zero-Shot Prompting

- Giving the model "no training" before asking it a question.
- Used by most people

### User

```
Classify the text into neutral, negative or positive. Text: I think the vacation is okay. Sentiment:
```

### **ChatGPT**

Neutral

### Few-Shot Prompting

- Giving the model a few "training examples" for expected output
- Very similar to how humans learn!

### User

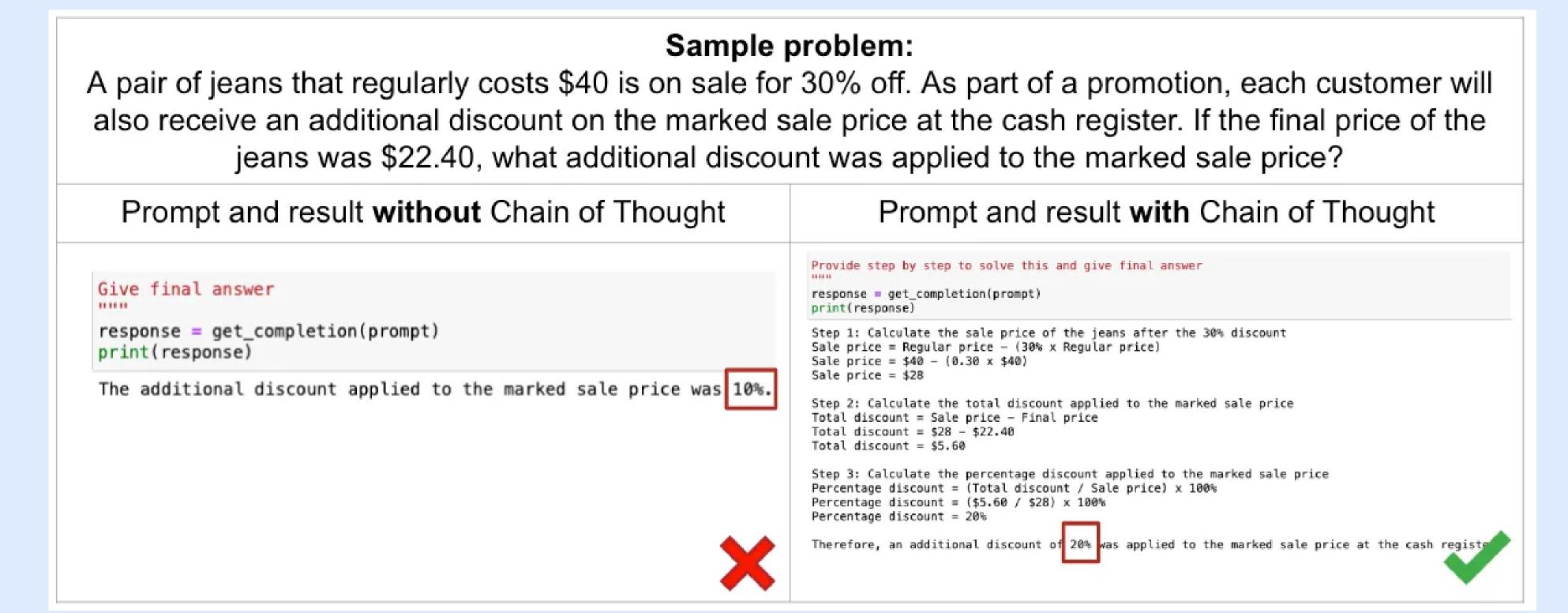
```
Swimming | yes Walking | yes Sitting | no Running | Diving |
```

### **ChatGPT**

```
Running | yes
Diving | yes
```

### Chain-of-Thought Prompting

- Ask the model to explain the intermediate reasoning steps
- Have the model walk through its solution
  - "Rubber Ducky Debugging"



### Generated Knowledge Prompting

- 1. Ask model to generate facts about a topic
- 2. Ask model to use these facts to generate an answer

```
# First ask the model to generate some content

prompt = f"""
Generate 2 points of the danger of cookie theft, \
explain how cookie theft works, and 5 things people \
can do to protect themselves against cookie theft.
"""
response = get_completion(prompt)
print(response)
```

Two points of the danger of cookie theft are:

- 1. Identity theft: Cookie theft can lead to identity theft, where the thief can gain access to sensitive information n such as login credentials, credit card details, and personal information. This can result in financial loss and d amage to one's reputation.
- 2. Unauthorized access: Cookie theft can also lead to unauthorized access to online accounts, which can be used to carry out malicious activities such as sending spam emails, posting inappropriate content, and stealing personal data.

Cookie theft works by stealing the cookies stored on a user's computer or device. Cookies are small text files that contain information about a user's online activity, such as login credentials, browsing history, and preferences. W hen a user visits a website, the website sends a cookie to the user's browser, which is then stored on the user's c omputer. If a hacker gains access to these cookies, they can use them to impersonate the user and gain access to the eir online accounts.

Here are five things people can do to protect themselves against cookie theft:

- 1. Use a secure browser: Use a browser that has built-in security features such as anti-phishing and anti-malware p rotection.
- 2. Use a VPN: Use a virtual private network (VPN) to encrypt your internet traffic and protect your online activity from prying eyes.

prompt = f"""
Two points of the danger of cookie theft are:
1. Identity theft: Cookie theft can lead to identity theft, where the thief can gain access to sensitive information
2. Unauthorized access: Cookie theft can also lead to unauthorized access to online accounts, which can be used to c
Cookie theft works by stealing the cookies stored on a user's computer or device. Cookies are small text files that
Here are five things people can do to protect themselves against cookie theft:
1. Use a cookies browsers like a browser that has built in cookies to only on anti-phicking and anti-phicking anti-phicking and anti-phicking anti-p

1. Use a secure browser: Use a browser that has built-in security features such as anti-phishing and anti-malware pr 2. Use a VPN: Use a virtual private network (VPN) to encrypt your internet traffic and protect your online activity

3. Clear cookies regularly: Clear your cookies regularly to remove any stored login credentials and other sensitive 4. Use two-factor authentication: Enable two-factor authentication on your online accounts to add an extra layer of

5. Use strong passwords: Use strong, unique passwords for each of your online accounts to prevent hackers from gaini

Use the knowledge above to create one article containing 3 short paragraphs on cookie theft.

# Then use the content generated for the main purpose/objective

response = get\_completion(prompt)
print(response)

Paragraph 1: Cookie theft is a serious threat to online security. It can lead to identity theft, where the thief can gain access to sensitive information such as login credentials, credit card details, and personal information. The is can result in financial loss and damage to one's reputation. Hackers can steal cookies stored on a user's computer or device, which contain information about a user's online activity, such as login credentials, browsing history, and preferences. If a hacker gains access to these cookies, they can use them to impersonate the user and gain access to their online accounts.

Paragraph 2: Another danger of cookie theft is unauthorized access to online accounts. Hackers can use stolen cookies to carry out malicious activities such as sending spam emails, posting inappropriate content, and stealing personal data. This can cause significant harm to the victim, as their online accounts may be used to spread malware or engage in illegal activities. It is important to take steps to protect yourself against cookie theft and other forms of online security threats.

Paragraph 3: To protect yourself against cookie theft, there are several things you can do. Use a secure browser wi th built—in security features such as anti—phishing and anti—malware protection. Use a virtual private network (VPN) to encrypt your internet traffic and protect your online activity from prying eyes. Clear your cookies regularly to remove any stored login credentials and other sensitive information. Enable two—factor authentication on your on line accounts to add an extra layer of security. Use strong, unique passwords for each of your online accounts to p

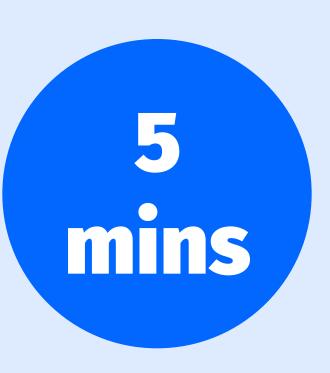
### Self-Refine Prompting

- 1. Ask model to provide an initial solution
- 2. Ask model to critique **original solution**, and address these problems
- The model "teaches itself"
- Solution-critique process repeats until user is happy with result
- Example in jam markdown!

### Tree-of-Thought Prompting

- 1. Ask model to provide possible solutions to a problem
- 2. Ask model to "run through" each of these solutions to find the best one
- Example in jam markdown!

### DAD JOKE COMPETITION 69



- 1. Using a prompting technique, use ChatGPT to generate **5 of** the best dad jokes.
- 2. Submit these jokes into the Google Form: <REPLACE\_LINK>
- 3. When your club leader shares the responses, vote for the top 3 best jokes.
- 4. GOOD LUCK AND HAVE FUN!!!!



## Brainstorm for your comic



- Come up with a one-sentence description of what your comic will be about
- Some examples:
  - **a. Fantasy Quest**: Follow the adventures of a group of unlikely heroes as they embark on a quest to save their world from an ancient evil. Along the way, they encounter mythical creatures, magical artifacts, and test the limits of their friendship and bravery.
  - **b. Space Explorers**: Set in the distant future, a team of intrepid astronauts explores uncharted regions of the universe, encountering alien civilizations, cosmic mysteries, and discovering the wonders and dangers of deep space.
  - **C. Magical Academy**: Attend a prestigious school for young wizards and witches as they learn to master their magical abilities. Follow their misadventures, magical duels, and the challenges they face while navigating the complexities of both the magical and human worlds.

### Create Comic-Book Outline (ChatGPT)

- Using one of the prompting techniques above, ask ChatGPT to generate an outline for the 8 sections of your comic
- For an example of self-refine prompting, check out my outline in the Jam markdown file:)

### Section 1: Introduction

Meet Alex, a passionate high school student in North Carolina who dreams of earning his private pilot license and is inspired by his aviation enthusiast father. He's determined to make his dream take flight and wants to prove himself both to his father and himself.

### Section 2: Setting Goals

Alex sets his goal to earn his private pilot license, but he also grapples with self-doubt and worries about the challenges ahead. As he researches flight schools and requirements, he seeks guidance from his father and the local aviation community, discovering the support and encouragement they offer.

### Section 3: Flight School Adventures

Alex enrolls in a reputable local flight school, where he meets his flight instructor, Captain Johnson, who is known for his strict yet caring teaching style. Alex also befriends fellow aviation enthusiasts, Sarah and Mike, who become his study buddies and support system. As they bond over their shared passion, the friendship among the trio deepens.

### Section 4: Challenges and Doubts

Flight training proves to be more challenging than Alex anticipated. He faces setbacks, struggles with complex concepts, and experiences moments of self-doubt. However, his determination and the encouragement from his family and friends keep him going. Through their support, he learns to overcome his doubts and embrace the learning process.

### Section 5: Solo Flight

After weeks of training, Alex faces a significant milestone – his first solo flight. The mixture of excitement and nervousness consumes him as he takes control of the aircraft alone, realizing the responsibility and freedom that comes with flying solo. This pivotal moment marks a turning point in his journey, boosting his confidence and reinforcing his passion for aviation.

### Section 6: Flight Test Preparation

## Generating Images (Stable Diffusion)

- Ask ChatGPT to turn the content from each section previously into a prompt for Stable Diffusion.
  - You'll need 8 prompts and 8 images total
- When prompting image generators, it's good to include:
  - Artists to take inspiration from
  - Format of the picture
  - Perspective
  - Style
- Prompting for Image Generators: tools.saxifrage.xyz/prompt

"Create a vibrant comic-style illustration featuring Alex, a determined high school student in North Carolina, who dreams of earning his private pilot license. Show Alex with a wide-eyed expression of excitement and wonder as he looks up at the sky filled with airplanes and clouds. Let his aviation enthusiast father be there, wearing a pilot's cap and sharing in his son's enthusiasm, supporting him in his journey. Surround them with motivational aviation posters and aviation-themed décor in the background, symbolizing Alex's aspirations and determination to soar high in the sky. Make sure to capture the essence of Alex's passion for flying and his desire to prove himself, both to his father and to himself, in the details of their expressions and body language."

### Section 1: Introduction

Meet Alex, a passionate high school student in North Carolina who dreams of earning his private pilot license and is inspired by his aviation enthusiast father. He's determined to make his dream take flight and wants to prove himself both to his father and himself.

### Section 2: Setting Goals

Alex sets his goal to earn his private pilot license, but he also grapples with self-doubt and worries about the challenges ahead. As he researches flight schools and requirements, he seeks guidance from his father and the local aviation community, discovering the support and encouragement they offer.

### Section 3: Flight School Adventures

Alex enrolls in a reputable local flight school, where he meets his flight instructor, Captain Johnson, who is known for his strict yet caring teaching style. Alex also befriends fellow aviation enthusiasts, Sarah and Mike, who become his study buddies and support system. As they bond over their shared passion, the friendship among the trio deepens.

### Section 4: Challenges and Doubts

Flight training proves to be more challenging than Alex anticipated. He faces setbacks, struggles with complex concepts, and experiences moments of self-doubt. However, his determination and the encouragement from his family and friends keep him going. Through their support, he learns to overcome his doubts and embrace the learning process.

### Section 5: Solo Flight

After weeks of training, Alex faces a significant milestone – his first solo flight. The mixture of excitement and nervousness consumes him as he takes control of the aircraft alone, realizing the responsibility and freedom that comes with flying solo. This pivotal moment marks a turning point in his journey, boosting his confidence and reinforcing his passion for aviation.

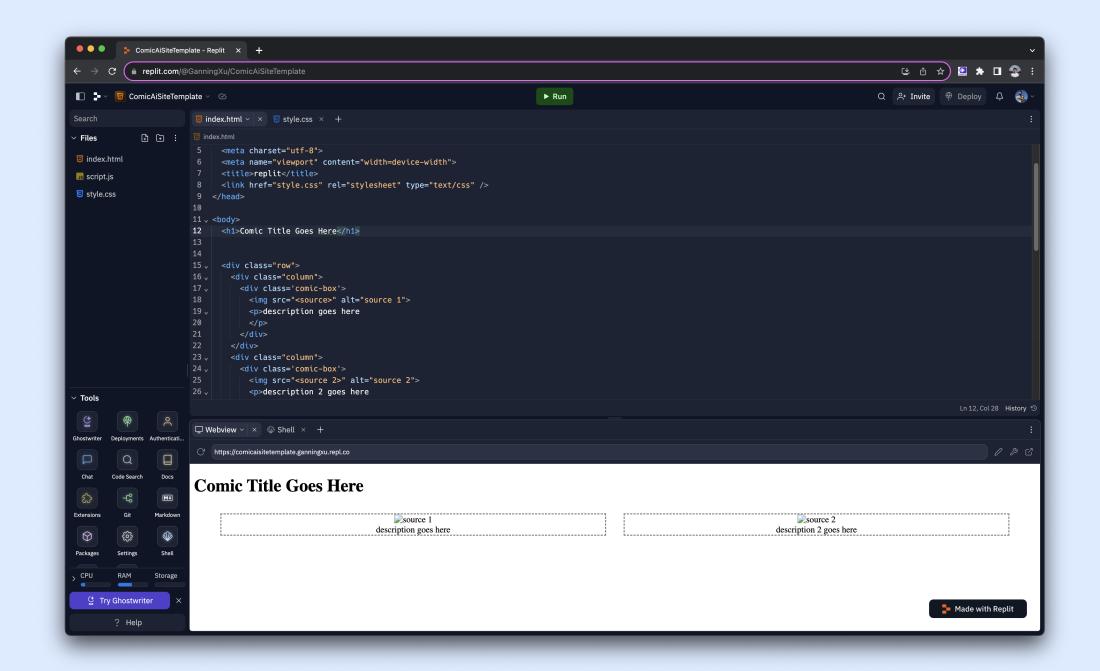
### Section 6: Flight Test Preparation

# Now, you should have 8 pieces of text and 8 images for your comic:)

Let's now build a website to share the comic!

### Start with the template

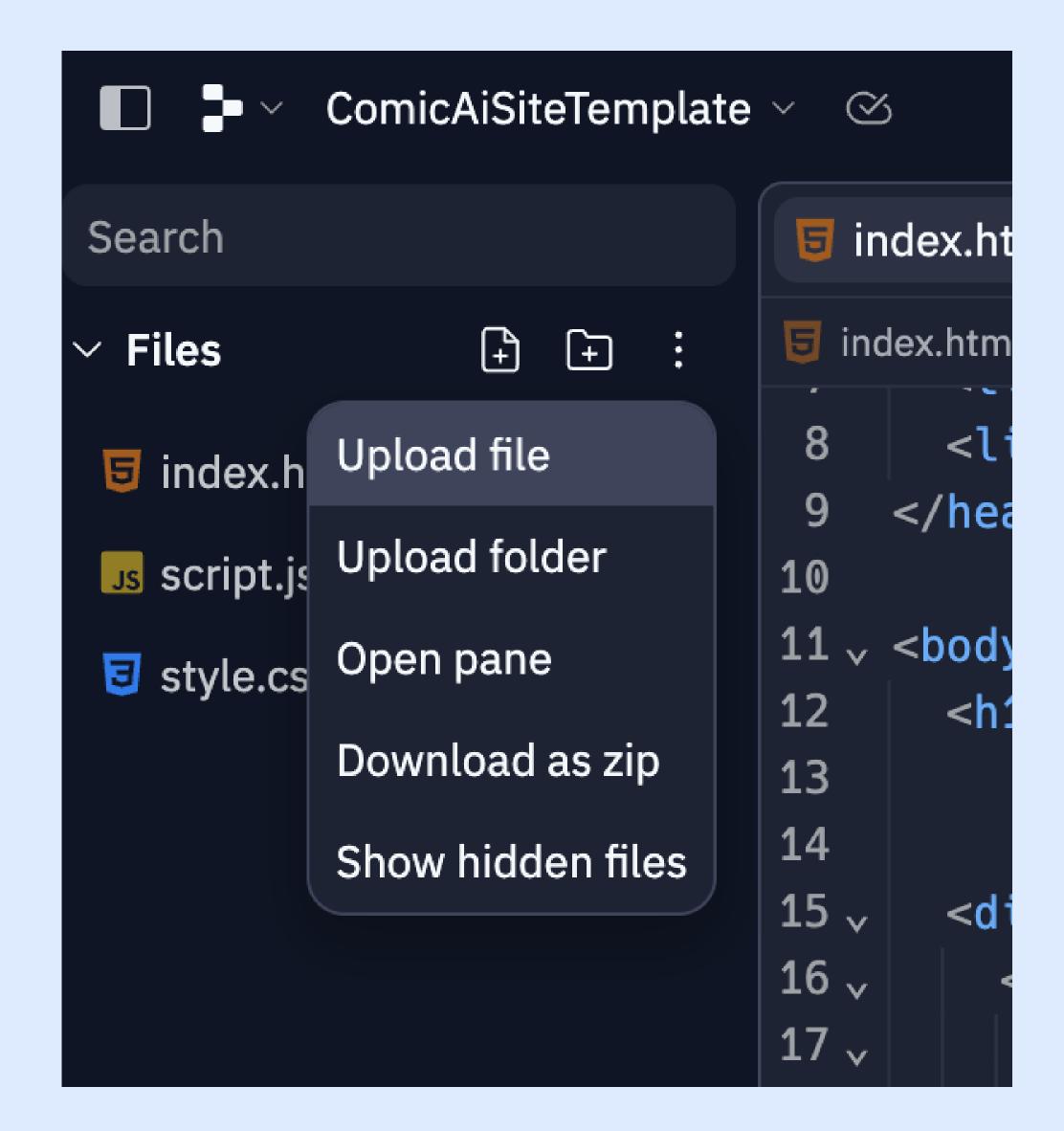
- 1. First, using the <u>provided site</u> template, click "Fork"
  - a. <a href="mailto:replit.com/@GanningXu/">replit.com/@GanningXu/</a>
    ComicAiSiteTemplate?v=1
- 2. Name the template anything you'd like. For example, you could use the title of your comic.
- 3. Now you should have an editable version that looks like this!



### Upload your images

We'll need to upload the Stable Diffusion generated images into the project

1. In the left file pane, click the three dots, and then click "Upload File"



### Upload your images

Using your file explorer, upload all the saved images that Stable Diffusion (or whichever image generator you used) created. After uploading, your file pane should look something like this (of course, your files may have different names).

```
■ ComicAiSiteTemplate ∨ ⊗
                           🥫 index.html 🗸 💉 🥫 style.css 🗴 🕂
Search
               £ ± :
 Files
                                 <link href="style.css" rel="stylesheet" type="text/css" />

    img1.png

    img3.jpeg

                                 <h1>Comic Title Goes Here</h1>

    img4.jpeg

                           13
                           14

    img5.jpeg

                                 <div class="row">

    img6.png

                                   <div class="column">
                                     <div class='comic-box'>

    img7.jpeg

                                       <img src="<source>" alt="source 1">
                                       description goes here

    img8.jpeg

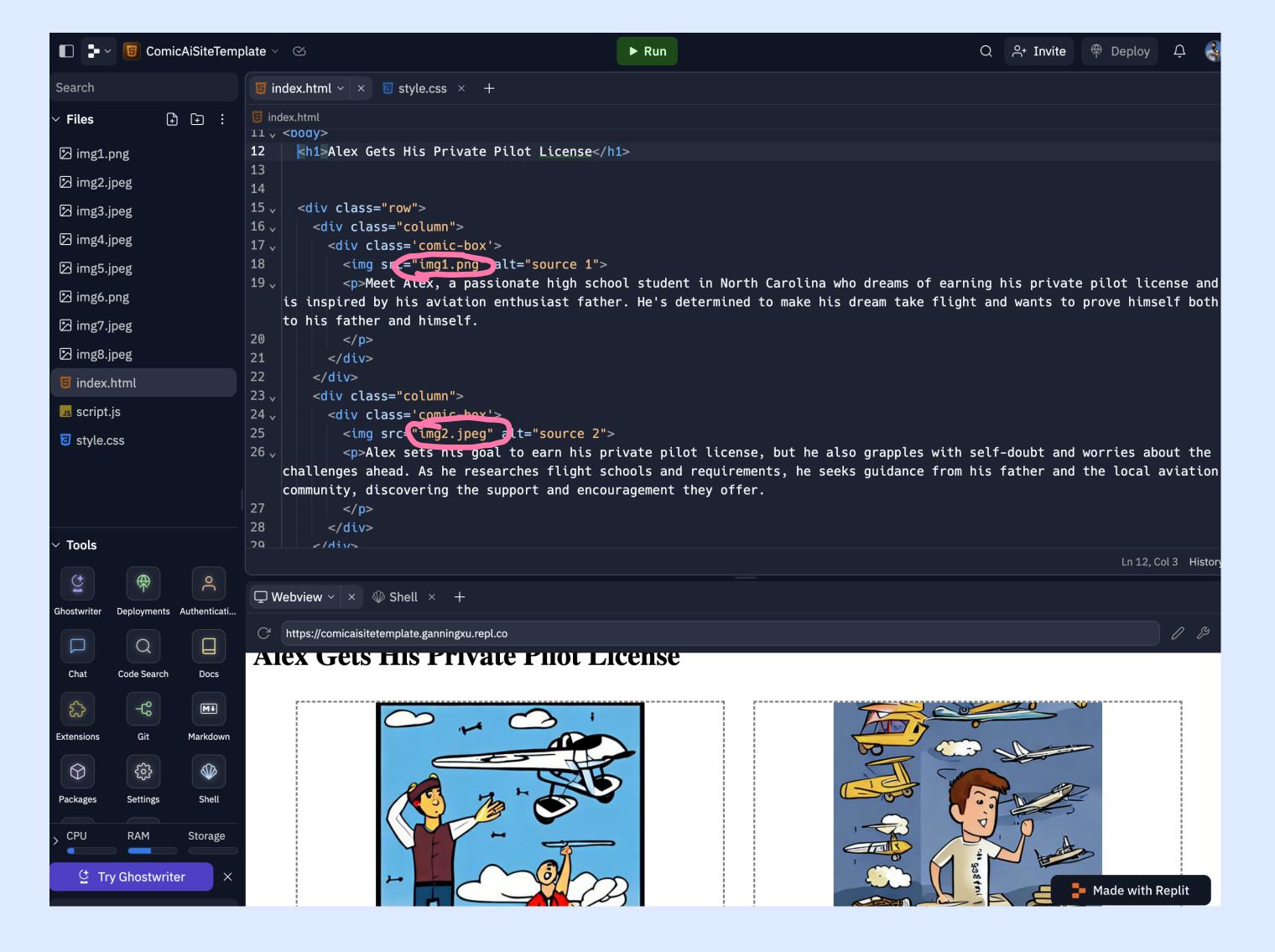
                                       20
 ፱ index.html
                           21
                                     </div>
                                   </div>
 script.js
                                   <div class="column">
 3 style.css
                          24 🗸
                                     <div class='comic-box'>
                          25
                                       <img src="<source 2>" alt="source 2">
                                       description 2 goes here
                          26 🗸
                          27
                                       </div>
```

## Editing the HTML

- 1. Let's get the images and text you uploaded onto your site!
- 2. Click into index.html on the file pane
- 3. On line 12, replace "Comic Title Goes Here" with the title of your comic.
- 4. Replace "<source>" with the filename of your first image.
- 5. Next, replace "description goes here" with the ChatGPT generated text for the first section.
- 6. Scroll down, and do the same with "<source 2>" and "description 2 goes here"
- 7. Repeat the process by replacing "<source x>" and "description x goes here" until you finish the last one (8).

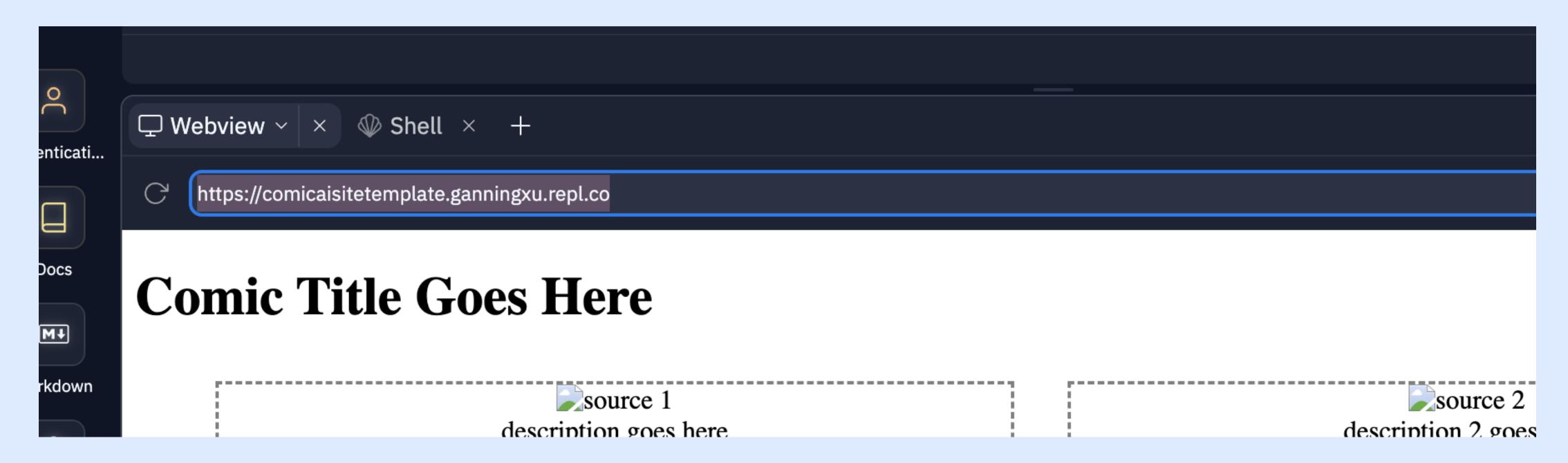
## Editing the HTML

For example, since the filename of my first image is called **img1.png** and filename of my second image is **img2.jpeg**, my index.html file looks like:



### Getting the URL

- 1. To get the sharable URL for your new site, first click the green "Run" button at the top of your screen.
- 2. Next, find the URL of the "embeded" browser, where your site is showing, and copy that URL, as shown below!



### HOORAY YOU DID IT!!!

