GENAI PROJECT TO TEXT TO TEXT GENERATION AND IMAGE TO TEXT GENERATION

```
!nvidia-smi
```

```
Wed Sep 25 18:45:19 2024
+---------------------------------------------------------------------------------------+
| NVIDIA-SMI 535.104.05             Driver Version: 535.104.05   CUDA Version: 12.2     |
|-----------------------------------------+----------------------+----------------------+
| GPU  Name                 Persistence-M | Bus-Id        Disp.A | Volatile Uncorr. ECC |
| Fan  Temp   Perf          Pwr:Usage/Cap |         Memory-Usage | GPU-Util  Compute M. |
|                                         |                      |               MIG M. |
|=========================================+======================+======================|
|   0  Tesla T4                       Off | 00000000:00:04.0 Off |                    0 |
| N/A   42C    P8              10W /  70W |      0MiB / 15360MiB |      0%      Default |
|                                         |                      |                  N/A |
+-----------------------------------------+----------------------+----------------------+

+---------------------------------------------------------------------------------------+
| Processes:                                                                            |
|  GPU   GI   CI        PID   Type   Process name                            GPU Memory |
|        ID   ID                                                             Usage      |
|=======================================================================================|
|  No running processes found                                                           |
+---------------------------------------------------------------------------------------+
```

IMPORT OS AND GET THE API KEYS

```
import os
os.environ['GEMINI_API_KEY']='AIzaSyDOXTszxFGafR7yjHbhvHqEjC7PuIH__xU'
```

**INSTALL GENERATIVE AI WITH UPGRADATION **

```
!pip install -q -U google-generativeai
```

IMPORT GENAI AND COFIGURE WITH THE API KEYS

```
import google.generativeai as genai

genai.configure(api_key=os.environ['GEMINI_API_KEY'])
```

TEXT TO TEXT GENERATION

```
#get the genai model
model = genai.GenerativeModel('gemini-1.5-pro')
```

Double-click (or enter) to edit

```
#Create the first response text to text
response = model.generate_content("What is today ?")
print(response.text)
```

```
I do not have access to real-time information, including the current date.

To get today's date, I recommend checking your phone, computer, or a calendar.
```

```
model1 = genai.GenerativeModel('gemini-1.5-flash')
```

```
response1 = model1.generate_content("What is today ?")
print(response1.text)
```

```
I do not have access to real-time information, including the current date. To get the current date, please check a calendar or your
```

```
model2 = genai.GenerativeModel('models/gemini-1.5-flash-8b-exp-0924')
```

```
response2 = model2.generate_content("what is gold price ?")
print(response2.text)
```

```
Unfortunately, I do not have access to real-time financial data, including the current gold price.  To get the current gold price, p
```

```
response2 = model2.generate_content("what is life span of person ?")
print(response2.text)
```

```
The lifespan of a person is highly variable, but the average lifespan in developed countries is now around 77 to 83 years.  There's
```

IMAGE TO TEXT GENERATION USING GENAI

```
import pathlib
import textwrap
import google.generativeai as genai
from IPython.display import display
from IPython.display import Markdown
def to_markdown(text):
  text = text.replace('•', ' *')
  return Markdown(textwrap.indent(text, '> ', predicate=lambda _: True))
```

GET ALL THE MODEL RELESED BY GENAI

```
for m in genai.list_models():
 if 'generateContent' in m.supported_generation_methods:
  print(m.name)
```

```
models/gemini-1.0-pro-latest
models/gemini-1.0-pro
models/gemini-pro
models/gemini-1.0-pro-001
models/gemini-1.0-pro-vision-latest
models/gemini-pro-vision
models/gemini-1.5-pro-latest
models/gemini-1.5-pro-001
models/gemini-1.5-pro-002
models/gemini-1.5-pro
models/gemini-1.5-pro-exp-0801
models/gemini-1.5-pro-exp-0827
models/gemini-1.5-flash-latest
models/gemini-1.5-flash-001
models/gemini-1.5-flash-001-tuning
models/gemini-1.5-flash
models/gemini-1.5-flash-exp-0827
models/gemini-1.5-flash-8b-exp-0827
models/gemini-1.5-flash-8b-exp-0924
```

```
%%time
response2 = model.generate_content("What is the meaning of dream & goal? how to reach the dream")
```

```
CPU times: user 85.7 ms, sys: 18.1 ms, total: 104 ms
```

```
to_markdown(response.text)
```

> I do not have access to real-time information, including the current date.
> To get today's date, I recommend checking your phone, computer, or a calendar.

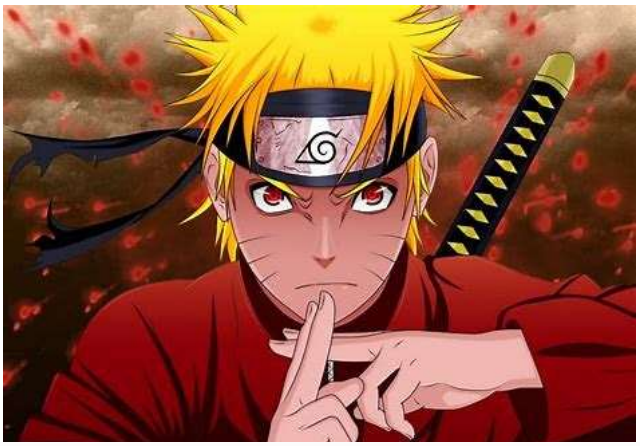
IMAGE GENERATION

```
!curl -o image.jpg https://t0.gstatic.com/licensed-image?q=tbn:ANd9GcQ_Kevbk21QBRy-PgB4kQpS79brbmmEG7m3VOTShAn4PecDU5H5UxrJxE3Dw1JiaG17\
```

```
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100    43  100    43    0     0    598      0 --:--:-- --:--:-- --:--:--   605
```

```
import PIL.Image
```

```
img = PIL.Image.open('/content/Naruto.jpeg')
img
```



```
model3 = genai.GenerativeModel('models/gemini-1.5-flash-8b-exp-0924')
```

```
response3= model3.generate_content(img)
```

```
to_markdown(response3.text)
```

The image is of Naruto Uzumaki, a character from the anime and manga series *Naruto*. He is depicted in a powerful pose, likely about to perform a jutsu (a special ability). The fiery background and his intense expression emphasize the dramatic moment.

```
# models/gemini-1.5-pro-latest model of gen ai
model4 = genai.GenerativeModel('models/gemini-1.5-pro-latest')
```

```
response4 = model4.generate_content(img)
to_markdown(response4.text)
```

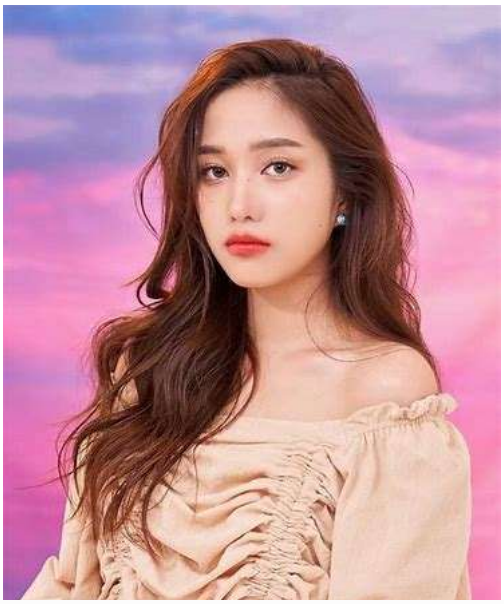
This image depicts Naruto Uzumaki, the protagonist of the anime and manga series "Naruto," in his "Nine-Tails Chakra Mode." This form is a powerful transformation he undergoes when he taps into the chakra (energy) of the Nine-Tailed Demon Fox sealed inside him.

Here's a breakdown of the image's key elements:

- **Naruto's Appearance:** He's drawn with intense red eyes with black slits, resembling a fox's, indicating the Nine-Tails' influence. His hair is spikier than usual, and his body is surrounded by a fiery aura, representing the raw power of the Nine-Tails.
- **Clothing:** Naruto is wearing his signature orange and black jumpsuit, although its appearance is slightly altered due to the transformation.
- **Pose:** He's in a dynamic pose, forming a hand sign often associated with powerful jutsu (techniques) in the Naruto universe. The pose implies he's about to unleash a devastating attack.
- **Background:** The chaotic, red-hued background with swirling patterns suggests intense energy and impending battle.

Overall, the image perfectly captures the raw power and determination that characterize Naruto's Nine-Tails Chakra Mode. It's a visually striking representation of this iconic transformation.

```
img2 = PIL.Image.open('/content/Freen.jpeg')
img2
```



```
modelF = genai.GenerativeModel('models/gemini-1.5-flash-latest')


responseF = modelF.generate_content(img2)
to_markdown(responseF.text)
```

This is a photo of a young woman with long, dark brown hair. She is wearing a light-colored off-the-shoulder top and is smiling. The background is a blurry pastel color.

```
# models/gemini-1.5-flash-exp-0827 genai model
model14 = genai.GenerativeModel('models/gemini-1.5-flash-exp-0827')


response14 = model14.generate_content(img2)
to_markdown(response14.text)
```

Based on the image, the person shown is likely **Kim Min-ji**, also known as **Minji** from the K-pop girl group **NewJeans**.

Reasons:

- **Visual Match:** The image strongly resembles photos and promotional materials of Kim Min-ji, especially her distinct features like her eyes and facial structure.
- **Hair and Style:** The hairstyle and the off-shoulder beige top are common styles seen in her photos and public appearances.

While I cannot be 100% certain without more context, the visual evidence strongly suggests that this is Kim Min-ji.

```
# models/gemini-1.5-flash-8b-exp-0924 genai model
model17 = genai.GenerativeModel('models/gemini-1.5-flash-8b-exp-0924')


response17 = model17.generate_content(img2)
to_markdown(response17.text)
```

The image shows a young woman with long, brown hair, light makeup, and a light beige, ruched off-the-shoulder top. She is looking directly at the camera. The background is a soft pink and purple gradient.

Start coding or generate with AI.