In [87]:
```
# import cv2 module
import cv2
import matplotlib.pyplot as plt

# resd the image
img = cv2.imread('IMG20220516183255.jpg')

# shape prints the tuple (height,weight,channels)
print(img.shape)

# img will be a numpy array of the above shape
# print(img)
plt.figure(figsize=(12, 16), dpi=80)
plt.imshow(img)
```

```
(4000, 3000, 3)
```

Out[87]:
```
<matplotlib.image.AxesImage at 0x23413e14be0>
```

Here 4000*3000 pixels are there and every pixel is an array of 3 integers (Red, Green, Blue).

In [19]:
```
total_pixels = 4000 * 3000
round(total_pixels / 2)
```

Out[19]:
```
6000000
```

The center pixels are at position 2000 and 1500

In [22]:
```
print(img[2000][1500])
```

Out[22]:
```
array([144, 102, 103], dtype=uint8)
```

In [67]:
```
import numpy as np
arr = np.array(img)
arr.shape

from PIL import Image

# creating a image object
im = Image.open(r"IMG20220516183255.jpg")
px = im.load()
```

In [84]:
```
from PIL import Image

pixels = im.load()
# create the pixel map
for i in range(arr.shape[0], 1): # for every pixel:
    for j in range(arr.shape[1], 1):
        if pixels[i,j] > (144, 102, 103):

            # change to black if not red
            pixels[i,j] = (0, 0, 0)
im
```

Out[84]: