In [1]:

```
import os
import pathlib
import cv2
import numpy as np
import matplotlib.pyplot as plt
import math
import time
import sys
import random
from google.colab.patches import cv2_imshow
import numpy as np
import pandas as pd
import os
```

In [2]:

```
!pip install keras-ocr
```

```
Looking in indexes: https://pypi.org/simple, (https://pypi.org/simple,) ht
tps://us-python.pkg.dev/colab-wheels/public/simple/ (https://us-python.pk
g.dev/colab-wheels/public/simple/)
Requirement already satisfied: keras-ocr in /usr/local/lib/python3.9/dist-
packages (0.9.2)
Requirement already satisfied: editdistance in /usr/local/lib/python3.9/di
st-packages (from keras-ocr) (0.5.3)
Requirement already satisfied: shapely in /usr/local/lib/python3.9/dist-pa
ckages (from keras-ocr) (2.0.1)
Requirement already satisfied: efficientnet==1.0.0 in /usr/local/lib/pytho
n3.9/dist-packages (from keras-ocr) (1.0.0)
Requirement already satisfied: tqdm in /usr/local/lib/python3.9/dist-packa
ges (from keras-ocr) (4.65.0)
Requirement already satisfied: pyclipper in /usr/local/lib/python3.9/dist-
packages (from keras-ocr) (1.3.0.post4)
Requirement already satisfied: essential_generators in /usr/local/lib/pyth
on3.9/dist-packages (from keras-ocr) (1.0)
Requirement already satisfied: imgaug in /usr/local/lib/python3.9/dist-pac
kages (from keras-ocr) (0.4.0)
```

In [3]:

```
import matplotlib.pyplot as plt
import keras_ocr
import cv2
import math
import numpy as np
```

In [4]:

```
!pip3 install pytesseract
!sudo apt install tesseract-ocr
```

```
Looking in indexes: https://pypi.org/simple, (https://pypi.org/simple,) http
s://us-python.pkg.dev/colab-wheels/public/simple/ (https://us-python.pkg.dev/
colab-wheels/public/simple/)
Requirement already satisfied: pytesseract in /usr/local/lib/python3.9/dist-p
ackages (0.3.10)
Requirement already satisfied: packaging>=21.3 in /usr/local/lib/python3.9/di
st-packages (from pytesseract) (23.0)
Requirement already satisfied: Pillow>=8.0.0 in /usr/local/lib/python3.9/dist
-packages (from pytesseract) (8.4.0)
Reading package lists... Done
Building dependency tree
Reading state information... Done
tesseract-ocr is already the newest version (4.1.1-2build2).
0 upgraded, 0 newly installed, 0 to remove and 23 not upgraded.
```

Method 1

In [5]:

```
img = cv2.imread("/content/1677401105669.jpg")
img.shape
```

Out[5]:

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

In [6]:

```
#img=cv2.resize(img,(500,600))
img.shape
```

Out[6]:

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

In [7]:

```
# Define the watermark text and font
def add_text(image,text):
    #text = "SAMPLE WATERMARK"
    font = cv2.FONT_HERSHEY_SIMPLEX
    font_scale = 1
    thickness = 1
    new = []
    j = 0
    text_size, _ = cv2.getTextSize(text, font, font_scale, thickness)
    print(text_size)
    x = random.randint(0, image.shape[1] - text_size[0])
    y = random.randint(0, image.shape[0] - text_size[1])

        # Draw the text on the image
    cv2.putText(image, text, (x, y), font, font_scale, (0, 0, 0), thickness, c
    k = "Text Watermarked Images/" +str(j)+".jpg"
    j = j+1
    cv2.imwrite(str(k),image)
    return image
```

In [8]:
```
text = "This is copywrited Images"
ss = add_text(img,text)
```

```
(409, 22)
```

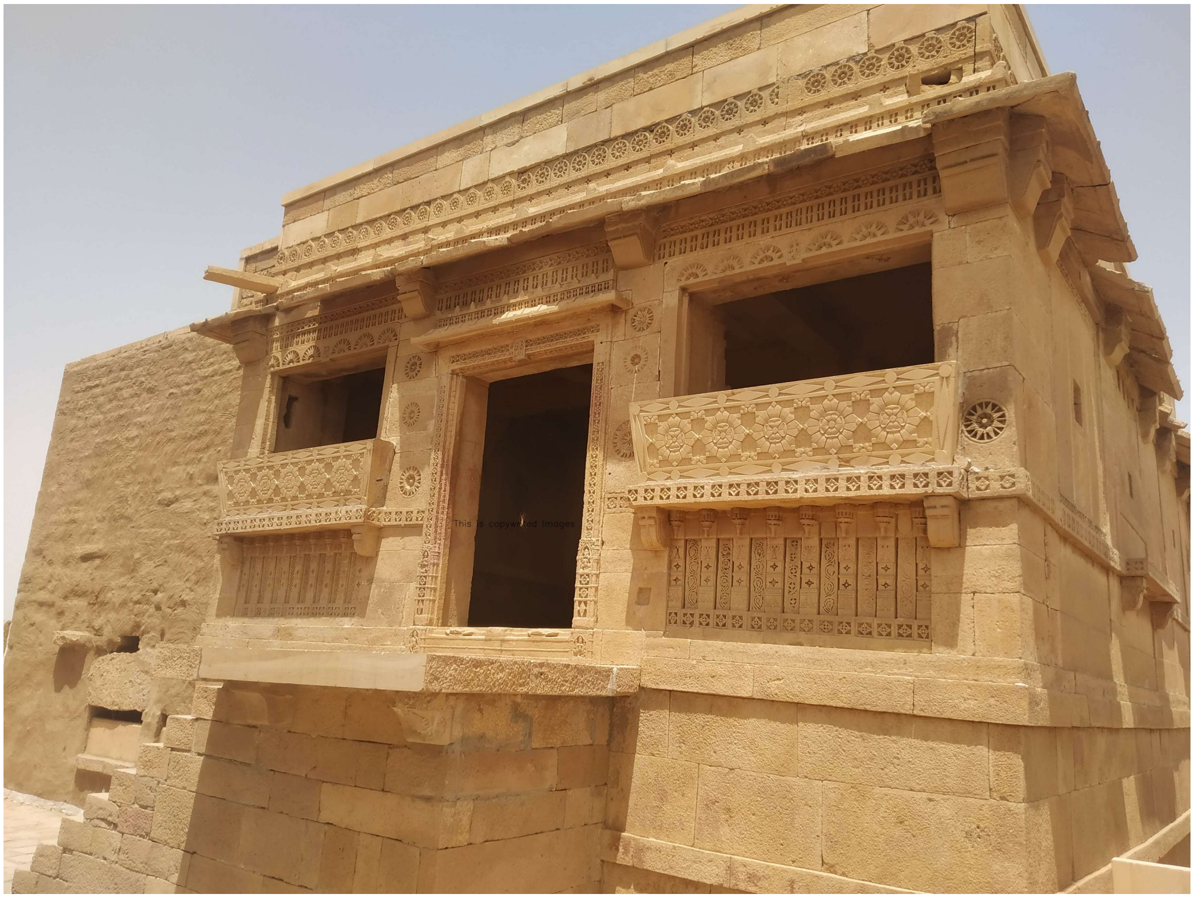
In [9]:
```
cv2.imwrite('1.jpg',ss)
```

Out[9]:
```
True
```

Method 2 Test

In [10]:
```
img = cv2.imread("/content/1.jpg")
#img = cv2.resize(img,(1500,1600))
```

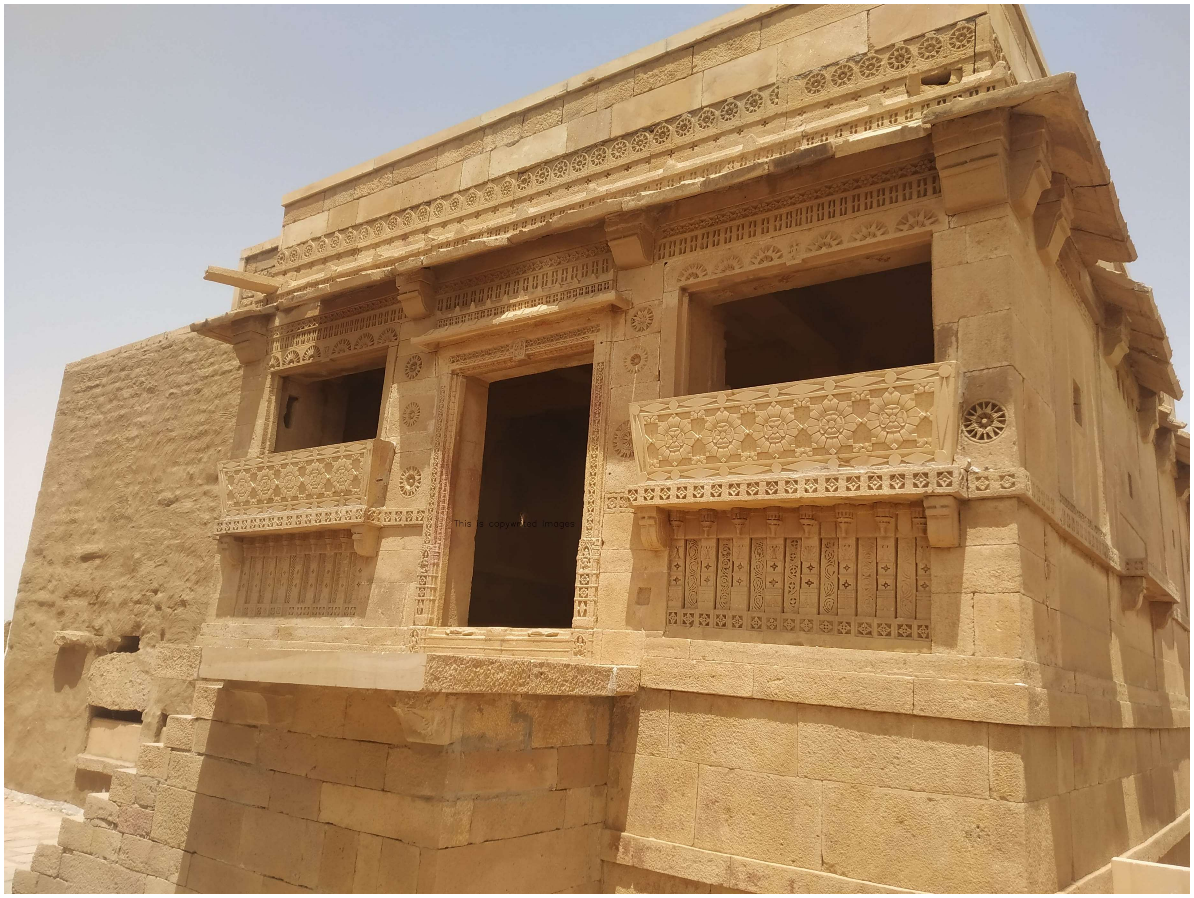
In [11]:
```
plt.figure(figsize=(10,10))
plt.imshow(img)
```



In [12]:
```
newimg=img.copy()
```

In [13]:

```
plt.figure(figsize=(10,10))
plt.imshow(img)
```



In [14]:

```
def midpoint(x1, y1, x2, y2):
    x_mid = int((x1 + x2)/2)
    y_mid = int((y1 + y2)/2)
    return (x_mid, y_mid)
```

In [15]:

```
def inpaint_text(img_path, pipeline):
    img = keras_ocr.tools.read(newimg)
    prediction_groups = pipeline.recognize([img])
    j = 0
    i = 1
    mask = np.zeros(img.shape[:2], dtype="uint8")
    for box in prediction_groups[0]:
        x0, y0 = box[i][0]
        x1, y1 = box[i][1]
        x2, y2 = box[i][2]
        x3, y3 = box[i][3]
        x_mid0, y_mid0 = midpoint(x1, y1, x2, y2)
        x_mid1, y_mid1 = midpoint(x0, y0, x3, y3)
        cv2.line(mask, (x_mid0, y_mid0), (x_mid1, y_mid1), 255, 25)
        inpainted_img = cv2.inpaint(img, mask, 15, cv2.INPAINT_NS)
    return(inpainted_img)
```

In [16]:
```
pipeline = keras_ocr.pipeline.Pipeline()
img_text_removed = inpaint_text(newimg, pipeline)
cv2.imwrite('text_removed_image.jpg', cv2.cvtColor(img_text_removed, cv2.COLOR
```

```
Looking for /root/.keras-ocr/craft_mlt_25k.h5
Looking for /root/.keras-ocr/crnn_kurapan.h5
1/1 [==============================] - 54s 54s/step
1/1 [==============================] - 4s 4s/step
```

Out[16]:
```
True
```

In [17]:
```
plt.figure(figsize=(10,10))
plt.imshow(img_text_removed)
```