**# Initialize empty list**

Set Imgs to empty list // Imgs🡨[]

**#Fecthing uploaded Bills from Firebase Storage**

Bills🡨db.child('Registered\_Users'). child(users[1]).child('Bills').get() // Initializing reference to the path

FOR b 🡨 IN bills.each():

**//Fetching key of the Uploaded Image**

Tempb🡨db.child('Registered\_Users').child(users[1]).child('Bills').child(b.key()).get()

PRINT [ "imageUrl”], ["date"]

Imgs🡨APPEND(["imageUrl"])

PRINT imgs [-1]

urllib. request. urlretrieve(imgs[-1],"image.jpeg”) //Retrieving Image URL

img 🡨 OPEN\_IMAGE("image.jpeg”) //Opening Image for processing

text 🡨tess. image\_to\_string(img) // Image to Text Conversion

**##Increasing Image Quality**

# Grayscale, Gaussian blur, Otsu's threshold

image 🡨cv2.imread('1.jpeg')

gray 🡨cv2.cvtColor(image, cv2.COLOR\_BGR2GRAY) // Using Grayscale effect

blur = cv2.GaussianBlur(gray, (3,3), 0) // Using Gaussian Blur effect

// Using Otsu's threshold

thresh = cv2.threshold(blur, 0, 255, cv2.THRESH\_BINARY\_INV + cv2.THRESH\_OTSU)[1]

**# Using Pandas Library**

dataset 🡨pd.DataFrame(columns=['Product\_Name','Price'])

**# Using nltk.tokenize Library**

Flag🡨FALSE // Setting Flag to FLASE

Set inputlistv to empty list //inputlistv= []

Set inputlistk to empty list //inputlistk= []

Set Keys to ['ITEM','QTY','QUANTITY','DESCRIPTION','DES','AMOUNT','AMT','PRICE','ITEM

DESCRIPTION','ITEMS']

FOR I 🡨 IN enumerate(text. splitlines()):

IF(any(l IN line.upper() FOR l 🡨 IN keys) OR flag):

flag=True // Setting Flag to TRUE

ELSE:

Continue

word\_list 🡨 word\_tokenize(line)

IF (LENGTH of word\_list > 1 AND any(i.isdigit() FOR i 🡨IN word\_list[-1])):

THEN Set temp to empty list //temp=[]

item\_words 🡨word\_list[:-1]

IF (item\_words [-1] equals 'R'):

THEN item\_words 🡨 item\_words [:-1]

FOR i🡨 IN item\_words:

IF (i. isalpha() AND not i.isspace()):

THEN temp. append(i)

Item🡨temp

PRINT (item)

price 🡨 word\_list[-1]

#dataset = dataset. append(pd.DataFrame([[item, price]], columns =dataset.columns))

IF 'TOTAL' IS IN line.upper():

THEN totalprice🡨price

break

inputlistk🡨APPEND (item)

inputlistv🡨APPEND(price)

PRINT inputlistk

PRINT inputlistv