AI ENGINEER'S TAKE-HOME TEST

AB-INBEV - February, 2024

All tasks are to be solved using OCR, and Python as the programming language.

Task 1:

Mr Lawrence just found 3 images of receipts containing a number of goods and services that his company purchased in times past.

Mr Lawrence has requested that you help him extract the following from all 3 images/receipts.

Extract the following from the images that have been given:

1. The date the receipt was issued.
2. The description of all the items that was purchased.
3. Total amount spent.

All 3 images for task 1 can be found in this google drive: link
Go to folder named **Task 1** to download the images.

Outputs should be shown/given in a dictionary format in your notebook.
E.g. In the image below on the left, the sample output is shown in the image on the right.

INVOICE

Issued on
12/10/2023

Due date
12/11/2023

YOUR INFORMATION

John Smith
123 Main Street, Anytown, USA
johnsmith@example.com

CLIENT INFORMATION

Jane Doe
456 Elm Street, Anycity, USA
janedoe@example.com

Item Description	Quantity	Unit Price	Total Price
Strategy Development	1	$150/hour	$150
Market Research	3	$200/hour	$600
Financial Analysis	2	$175/hour	$350
Business Planning	1	$250/hour	$250
Project Management	4	$180/hour	$720

Total Amount Due: $2,070

John Smith

Thank you for choosing our services! We appreciate the opportunity to work with you. Please make the payment within 30 days of receiving this invoice. If you have any questions or concerns regarding the invoice, feel free to contact us at the provided email address. We look forward to serving you again in the future.

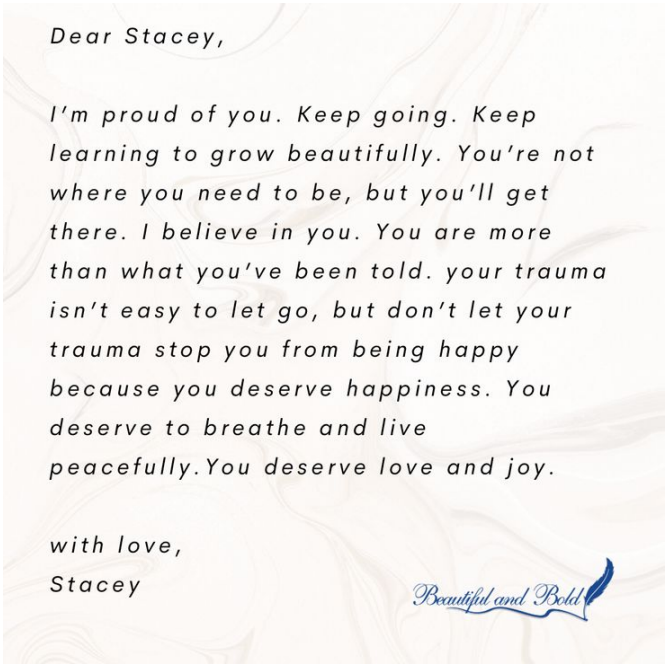
```
{'Date Issued': '12/10/2023',
 'Items': "['Strategy Development','Market Research', 'Financial Analysis']",
 'Total Amount': '$2,070'}
```

Task 2:

Extract all the texts from the image, and then rearrange the extracted texts based on their coordinates (ymax or ymin) from top to bottom.

Save the extracted texts/words and their corresponding coordinates (ymax or ymin) in a pandas DataFrame. Export it as a csv file.

e.g. in the image below:



The output csv file will look like this:

Word/Text	Coordinate (Ymax)
"Dear"	0.03515625
"Stacy,"	0.037109375
"proud"	0.1494140625
"Keep going"	0.1513671875
"of you "	0.15234375
"I'm"	0.1533203125
"Keep"	0.1533203125
"beautifully"	0.2109375
"learning"	0.2119140625

The image for task 2 can be found in this google drive: link
Go to folder named **Task 2** to download the image.

Submission Format:

For Task 1:
Submit the notebook used to extract the required words, showing each cell in your notebook with their outputs.
We will also be running the notebooks on our ends to verify your result.

For Task 2:
Submit the csv file containing the extracted words and their coordinates, and submit the notebook/ python file containing the code used to extract the words, and used to generate the DataFrame.
We will also be running the notebooks on our ends to verify your result.

Instructions:

1. You are not expected to train new models to perform OCR on the images, so you can use any open-source OCR solutions out there. E.g.
    a. MindEE DOCTR
    b. PaddleOCR.
    c. Google Tesseract OCR. Etc.

2. Don't worry about wrongly spelt word(s) as the model might make some mistakes some times.
3. The programming language you are to use is Python.