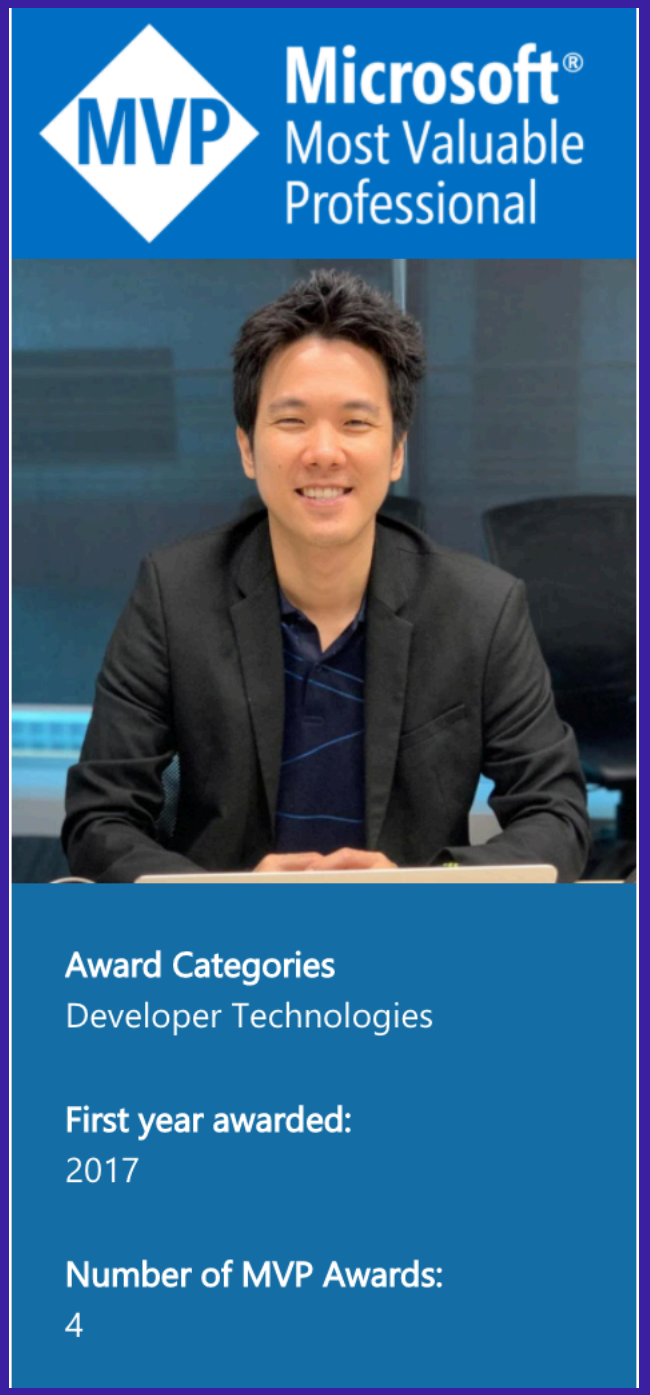
Introduction to Azure Form Recognizer

Teerasej Jiraphatchandej

Microsoft MVP

@teerasej



Pon

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The Problem

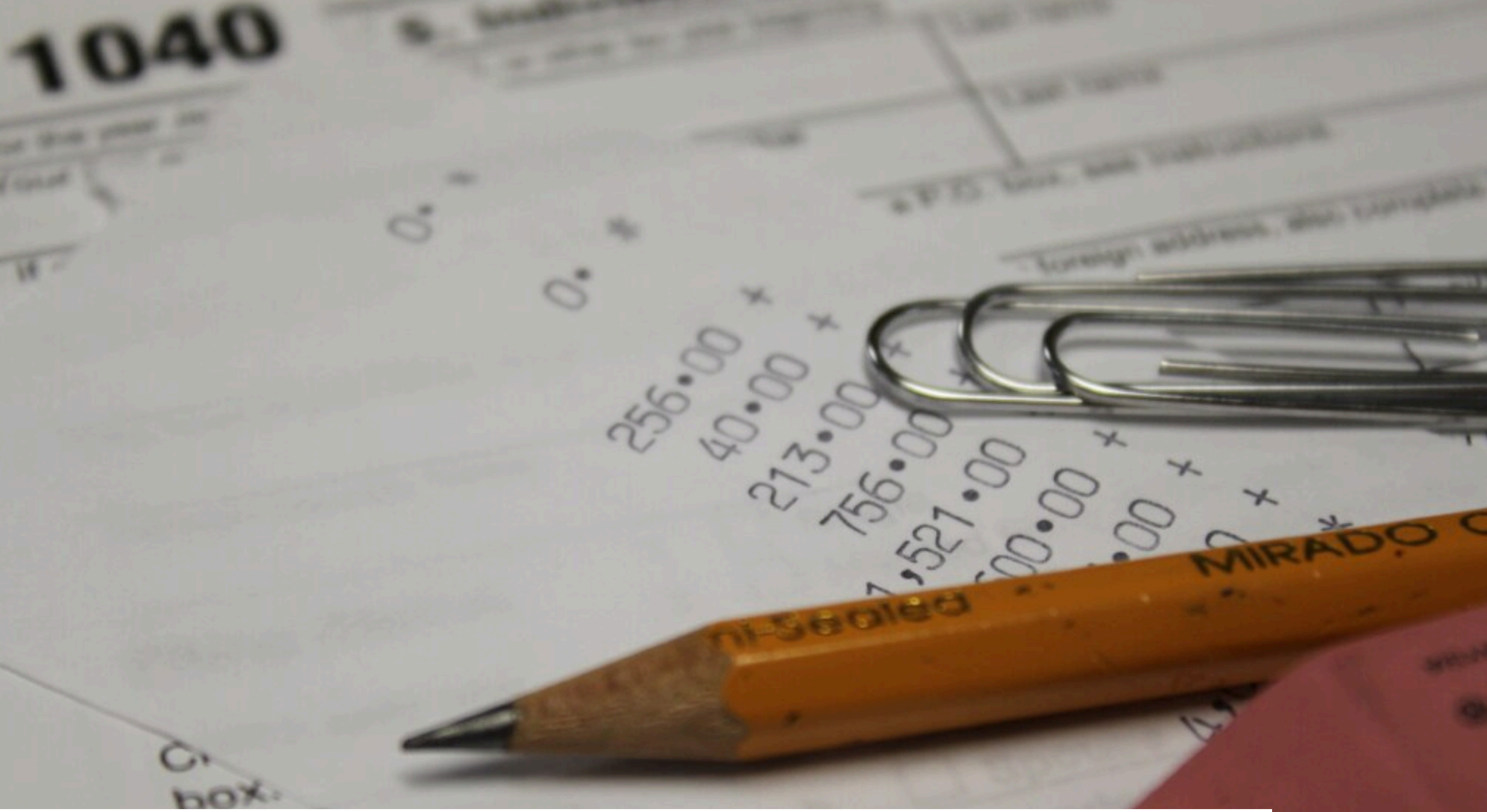
What is it?

How to use it?

The Problem

What is it?

How to use it?



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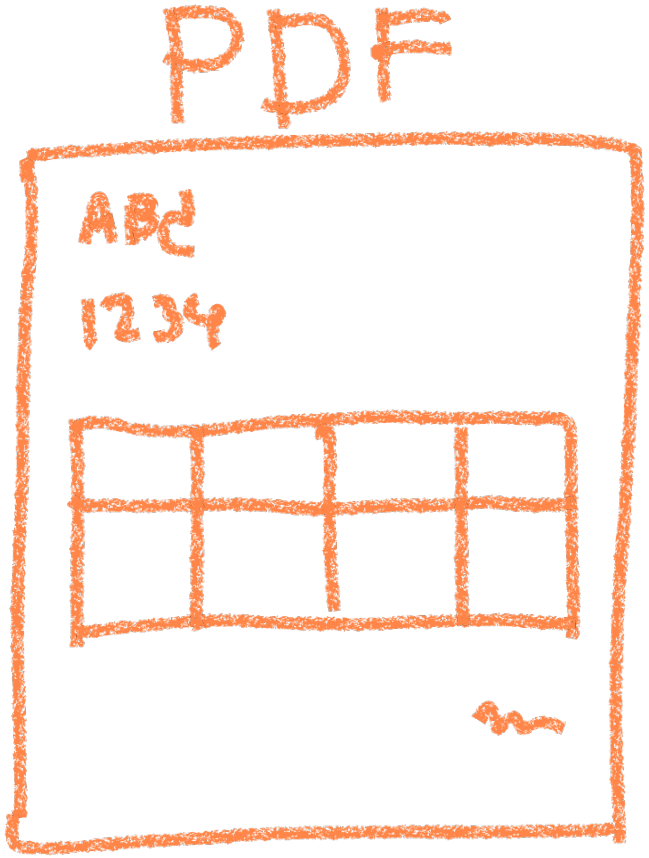
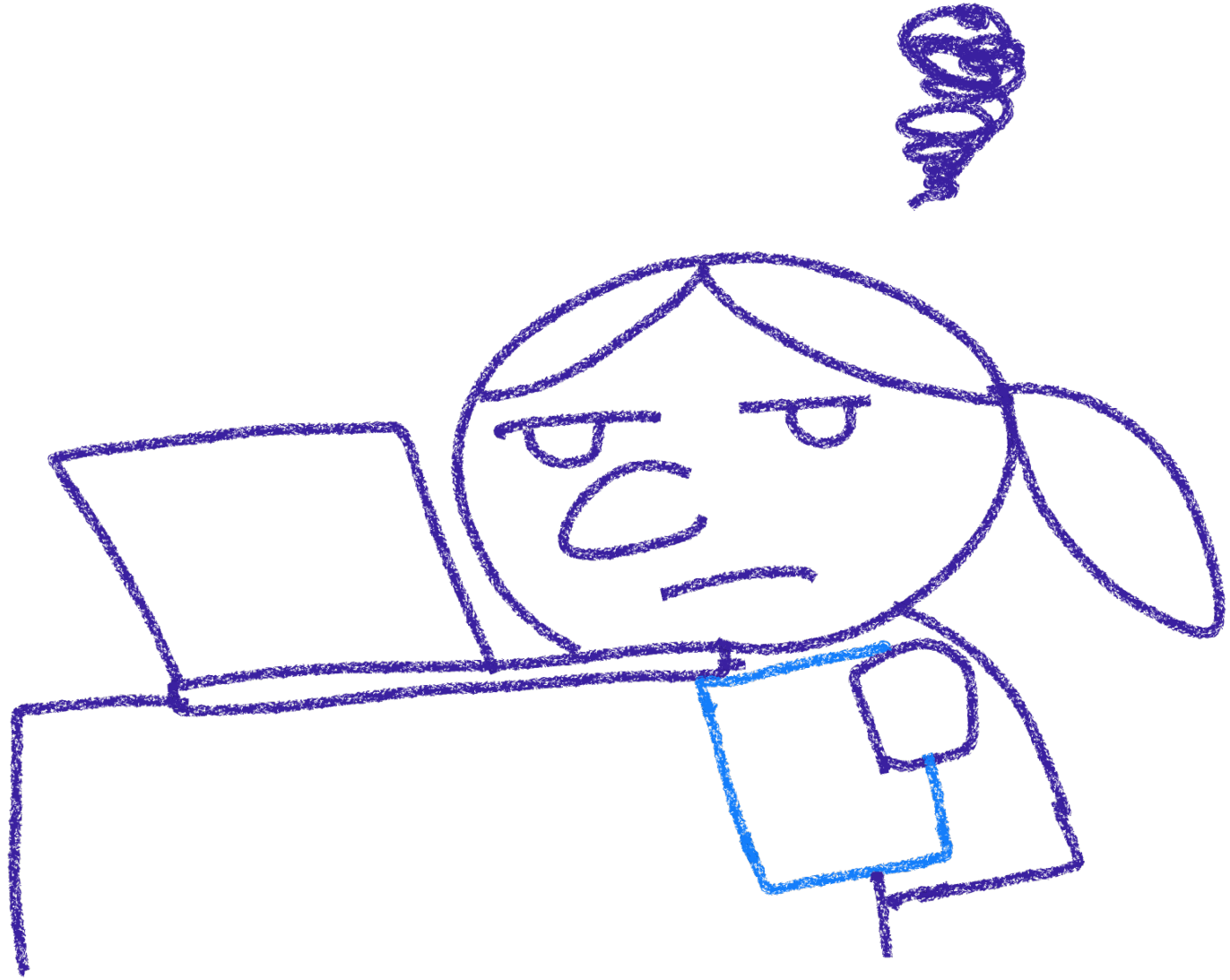
20:21
App Library
Recently Added
Suggestions
Productivity & Finance
Social
Creativity
Utilities

Paper


PDF
ABC
1234



OCR?

(Optical Character Recognition)

1234

That’s it, we need AI here!

The Problem

What is it?

How to use it?

Microsoft Azure:
Form Recognizer

Form Recognizer is…

- A Cognitive Service
- Goal
  - Extract text, key/value pairs, tables from document
  - Reduce manual intervention & extensive data science expertise

Form Recognizer Service

- Prebuilt model
  - Receipt
  - Invoice
  - Business Card
- Layout API
- Custom-model

Prebuilt Model

Prebuilt Business Cards

Page #	Field name	Value	Confidence %
1	CompanyNames	CONTOSO	76.8%
1	ContactNames	Chris Smith	99.0%
1	JobTitles	Senior Researcher	99.0%
1	Departments	Cloud & AI Department	98.6%
1	Emails	chris.smith@contoso.com	99.0%
1	Websites	https://www.contoso.com/	99.5%
1	MobilePhones	+1 (987) 123-4567	99.5%
1	OtherPhones	+1 (987) 213-5674	98.8%
1	Faxes	+1 (987) 312-6745	98.9%
1	Addresses	4001 1st Ave NE Redmond, WA 98052	98.7%


```
  ],
  "documentResults": [
    {
      "docType": "prebuilt:businesscard",
      "pageRange": [
        1,
        1
      ],
      "fields": {
        "CompanyNames": {
          "type": "array",
          "valueArray": [
            {
              "type": "string",
              "valueString": "CONTOSO",
              "text": "CONTOSO",
              "boundingBox": [
                535,
                1571,
                1331,
                1571,
                1332,
                1722,
                534,
                1719
              ],
              "page": 1,
              "confidence": 0.768
            }
          ]
        },
        "ContactNames": {
          "type": "array",
          "valueArray": [
            {
              "type": "object",
              "valueObject": {
                "FirstName": {
                  "type": "string",
                  "valueString": "Chris",
                  "text": "Chris",
                  "boundingBox": [
                    1556,
                    2018,
                    1920,
                    2021,
                    1919,
                    2156,
                    1558,
                    2154
                  ],
                  "page": 1
```

Layout API

INVOICE

DATE
Oct 21, 2020

INVOICE NO
1726

ADATUM CORPORATION
234 France Ave
WA 76328
www.adatum.com
sales@adatum.com

INVOICE TO
Fabrikam, Inc.
345 North St
NY 98052

Customer Id: 5791

SALESPERSON	PAYMENT TERMS	DUE DATE
Jacob Steffensen	Due on Receipt	Nov 21, 2020

QUANTITY	DESCRIPTION	UNIT PRICE	LINE TOTAL
05	Pool filter cartridge	$9.96	$49.80
01	C Filter replacement	$12.49	$12.49
01	Chlorinating tablets	$85.00	$85.00

Subtotal: $147.29
Sales Tax: $2.96
Total: $150.25

Adventure Works Cycles
National Harbor
Marketing and Business division
Customer Service
Tel: 45 35 15 55 – Fax: 45 85 16 15

00577710 15/ 09/ 20
Invoice nb
N F 845 089 98

Stopover	19445003
Ship	AV DOLCE
In	15/ 12/ 18
Out	17/ 12/ 18
Rate	

CUSTOMER: 029 VALEO SEJ: 3 NB E/ S: 1

Realization		Unit	Quantity	Unit Price	Amount
TAX I SPS			1	10000	10000, 00
Ship monitoring		TJ	18358	0,119	101503, 00
Entry		TJ	18358	0,173	147562, 00
Stay tax		TJ	18358	0,135	307066, 00
LightHouse		TJ	18358	0,033	25021, 00
Entry			18358	0,173	147562, 00
Stay tax		TJ	18358	0,135	307066, 00
LightHouse		TJ	18358	0,033	25021, 00

N-UM	644889, 00
TOTAL	
N-UM	103184, 00
N-UM	748072, 00
VAT	
TOTAL VAT Incl	

Invoice amount is the following:
Seven hundred fourty eight thousand seventy two CFA

Responsible Service head Director

NB: every reclamation should be sent within 15 days

PART I
Item 1

STOCKHOLDERS' EQUITY STATEMENTS

(In millions) (Unaudited)	Three Months Ended March 31,		Nine Months Ended March 31,	
	2020	2019	2020	2019
Common stock and paid-in capital				
Balance, beginning of period	$ 79,625	$ 77,556	$ 78,520	$ 71,223
Common stock issued	342	274	1,003	6,521
Common stock repurchased	(1,492)	(1,218)	(3,649)	(3,433)
Stock-based compensation expense	1,338	1,172	3,940	3,462
Other, net	0	7	(1)	18
Balance, end of period	79,813	77,791	79,813	77,791
Retained earnings				
Balance, beginning of period	30,739	16,585	24,150	13,682
Net income	10,752	8,809	33,079	26,053
Common stock cash dividends	(3,865)	(3,518)	(11,627)	(10,592)
Common stock repurchased	(5,614)	(3,538)	(13,590)	(11,482)
Cumulative effect of accounting changes	0	0	0	677
Balance, end of period	32,012	18,338	32,012	18,338
Accumulated other comprehensive income (loss)				
Balance, beginning of period	(255)	(2,013)	(340)	(2,187)
Other comprehensive income	2,931	748	3,016	989
Cumulative effect of accounting changes	0	0	0	(67)
Balance, end of period	2,676	(1,265)	2,676	(1,265)
Total stockholders' equity	$ 114,501	$ 94,864	$ 114,501	$ 94,864
Cash dividends declared per common share	$ 0.51	$ 0.46	$ 1.53	$ 1.38

Refer to accompanying notes.

The Problem

What is it?

How to use it?

Using Form Recognizer Service

- Try it
  - https://fott-preview.azurewebsites.net/
- REST API
  - API Reference: http://bit.ly/39VBKJx
- Client Library
  - Python
  - .NET
  - Java
  - JavaScript

Is it easy?
Let do it.

Thank you :)
Q & A

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