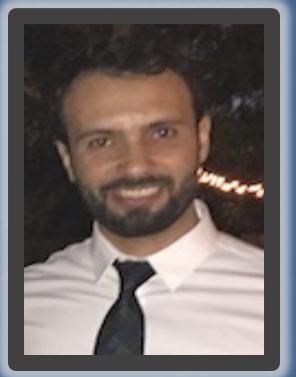
UNIVERSAL BASIC INCOME ANALYSIS



NUMISMATICS & UNIVERSAL BASIC INCOME ANALYSIS

PRESENTED BY HATEM AL-GHUTI

SUMMARY

Numismatic tools for Analyzing Universal Basic Income

Objective- develop tool for analyzing the feasibility of Universal Basic Income. The Financial problem which will be analyzed are presented by certain requirements related to Shariah based monetary systems— affecting approximately 24% of the world population.

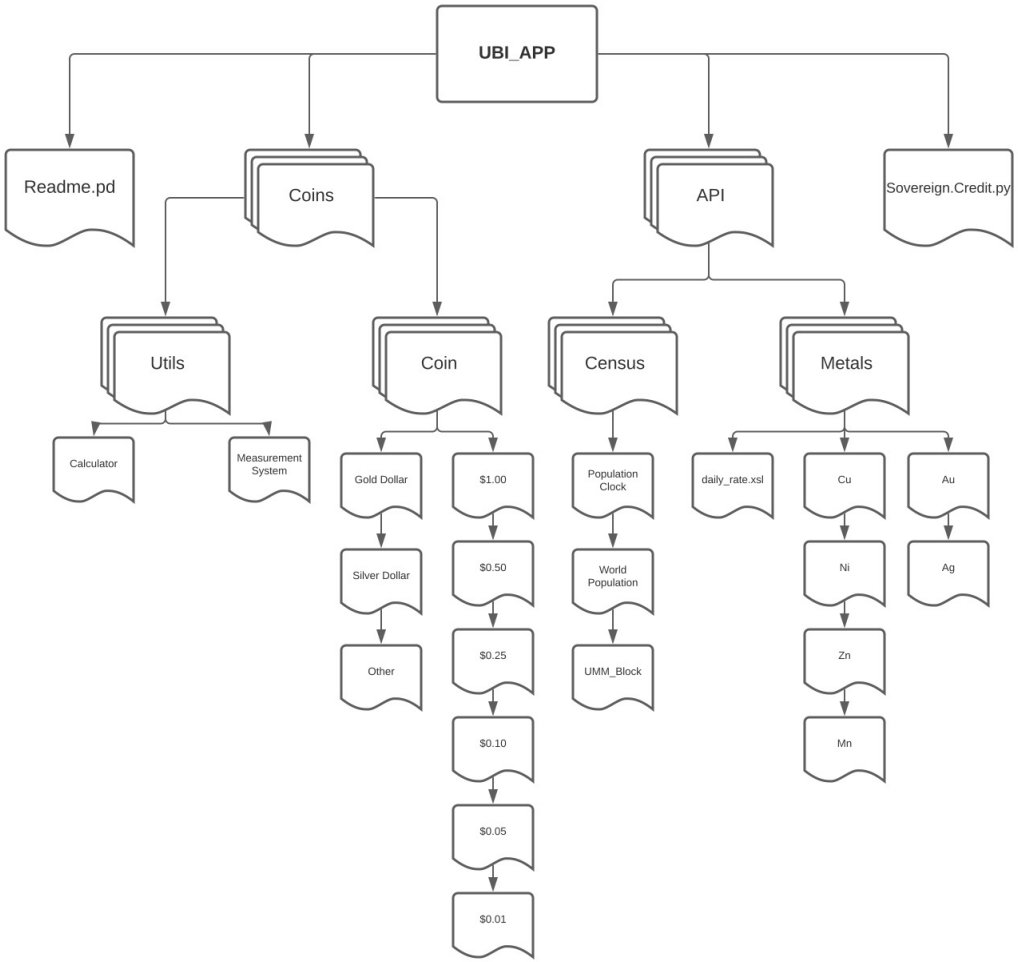
PART 1- Overview & App Installation

PART 2- Database & API Integration

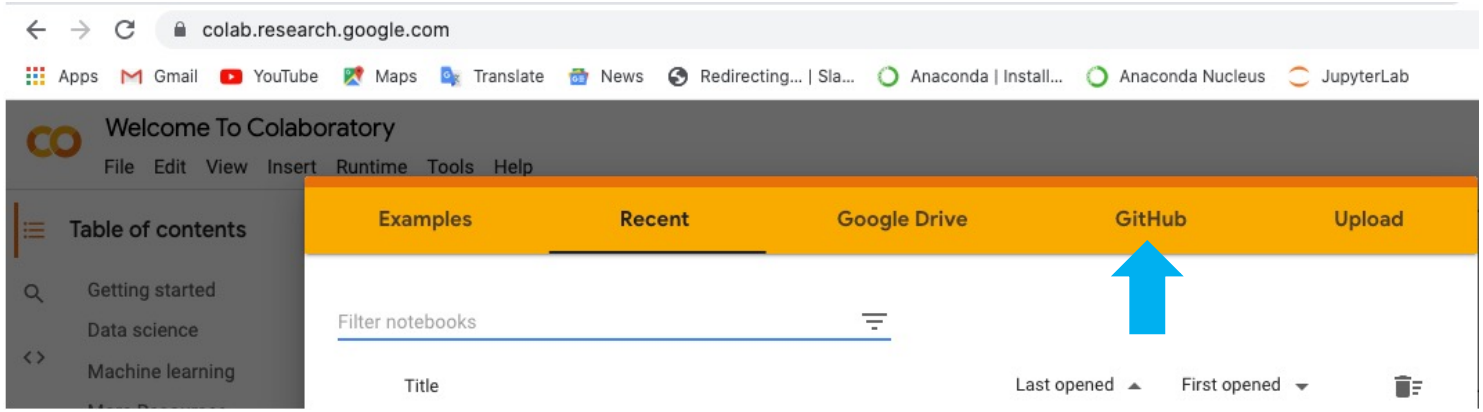
PART 2- Market Overview

PART 1- Installation

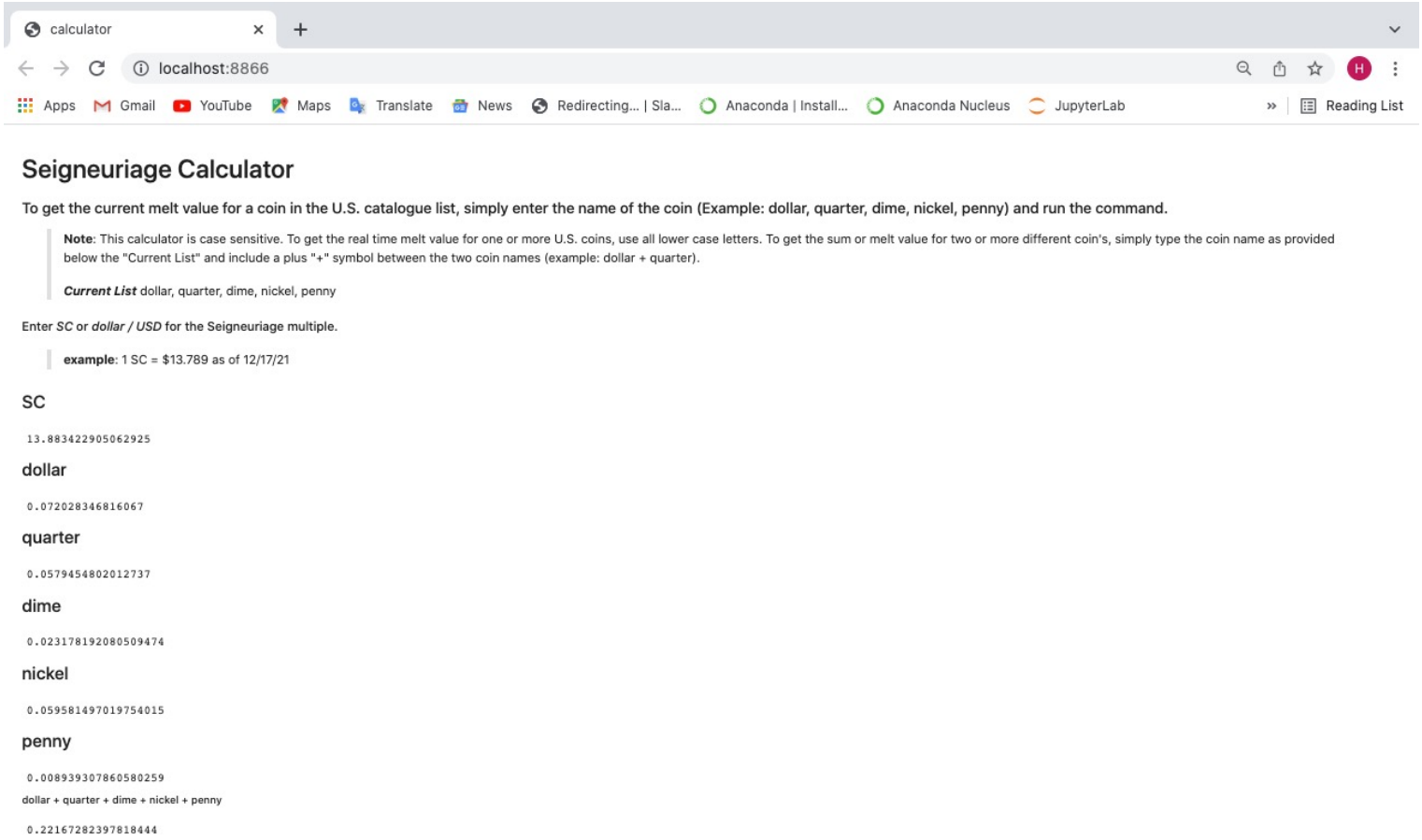
OVERVIEW


UBI_APP
Readme.pd
Coins
API
Sovereign.Credit.py
Utils
Coin
Census
Metals
Calculator
Measurement System
Gold Dollar
$1.00
Population Clock
daily_rate.xsl
Cu
Au
Silver Dollar
$0.50
World Population
Ni
Ag
Other
$0.25
UMM_Block
Zn
$0.10
Mn
$0.05
$0.01

Installation



Calculator App



PART 1- Organizing Data

Database & API Integration

Coins

Denomination	Cent 	Nickel 	Dime 	Quarter Dollar 	Half Dollar 	Dollar 
Composition	Copper Plated Zinc 2.5% Cu Balance Zn	Cupro-Nickel 25% Ni Balance Cu	Cupro-Nickel 8.33% Ni Balance Cu	Cupro-Nickel 8.33% Ni Balance Cu	Cupro-Nickel 8.33% Ni Balance Cu	Manganese-Brass 88.5% Cu 6% Zn 3.5% Mn 2% Ni
Weight	2.500 g	5.000 g	2.268 g	5.670 g	11.340 g	8.1 g
Diameter	0.750 in. 19.05 mm	0.835 in. 21.21 mm	0.705 in. 17.91 mm	0.955 in. 24.26 mm	1.205 in. 30.61 mm	1.043 in. 26.49 mm
Thickness	1.52 mm	1.95 mm	1.35 mm	1.75 mm	2.15 mm	2.00 mm
Edge	Plain	Plain	Reeded	Reeded	Reeded	Edge-Lettering
No. of Reeds	N/A	N/A	118	119	150	N/A

PART 1: MEASUREMENT VARIABLES

In [4]:
```
avdp_ou = 28.34952312
%store avdp_ou
```

```
Stored 'avdp_ou' (float)
```

In [5]:
```
troy_ou = 31.1034768
```

In [6]:
```
metric_tonne = 1000000
```

In [7]:
```
gram = 1
```

PART 2: COIN LIST & WEIGHTS

In [8]:
```
# provide the weight (in grams) for each of the coins listed in the US mint catalog.

Penny_wt = 2.5*gram
Nickel_wt = 5.0*gram
Dime_wt = 2.268*gram
Quarter_wt = 5.67*gram
Half_Dollar_wt = 11.34*gram
dollar_coin_wt = 8.1*gram
```

API INTEGRATION

In [9]:
```
# The Population Calculator & Metal Prices API Call endpoint URLs

Population_url = "https://api.census.gov/data/2019/pep/population"

Metals_url = "https://www.metals-api.com/api/latest?access_key=g7t30l1a5xvpn5e3d22fg95dc5zzom6epc728v26y870gu4mp38o7rn0aiv5&base=USD&symbo
```

Step 2: Using the Python requests library, make an API call to access the current price USD for metals

In [10]:
```
response = requests.get(Metals_url).json()
```

Step 3: Use the json.dumps function to review the response data from the API call

> **To-Do**: Use the indent and sort_keys parameters to make the response object readable

In [11]:
```
print(json.dumps(response, indent=4, sort_keys=True))
```


```
{
    "base": "USD",
    "date": "2021-12-21",
    "rates": {
        "NI": 1.646374403514,
        "USD": 1,
        "XAG": 0.0449190456,
        "XAU": 0.00055830132,
        "XCU": 3.7126901669759,
        "ZNC": 10.379441282259
    },
    "success": true,
    "timestamp": 1640064780,
    "unit": "per ounce"
}
```


```
# Copper Price per Avdp Ounce

cu_rates = response['rates']['XCU']
USD = response['rates']['USD']

cu_avdp_ou  = USD/cu_rates

print(f"copper avdp ou ${cu_avdp_ou: .2f}")
```

```
# Nickel Price per Avdp Ounce
ni_rates = response['rates']['NI']
USD = response['rates']['USD']

ni_troy_ou = USD/ni_rates

print(f"Nickel avdp ou ${ni_troy_ou: .5f}")

%store USD
```

```
zn_rates = response['rates']['ZNC']
USD = response['rates']['USD']

zn_avdp_ou = USD/zn_rates

print(f"Zinc avdp ou ${zn_avdp_ou: .5f}")
```

PART 2- The Opportunity

OVERVIEW

MUSLIM MAJORITY NATIONS

Current Players

1. Kinesis

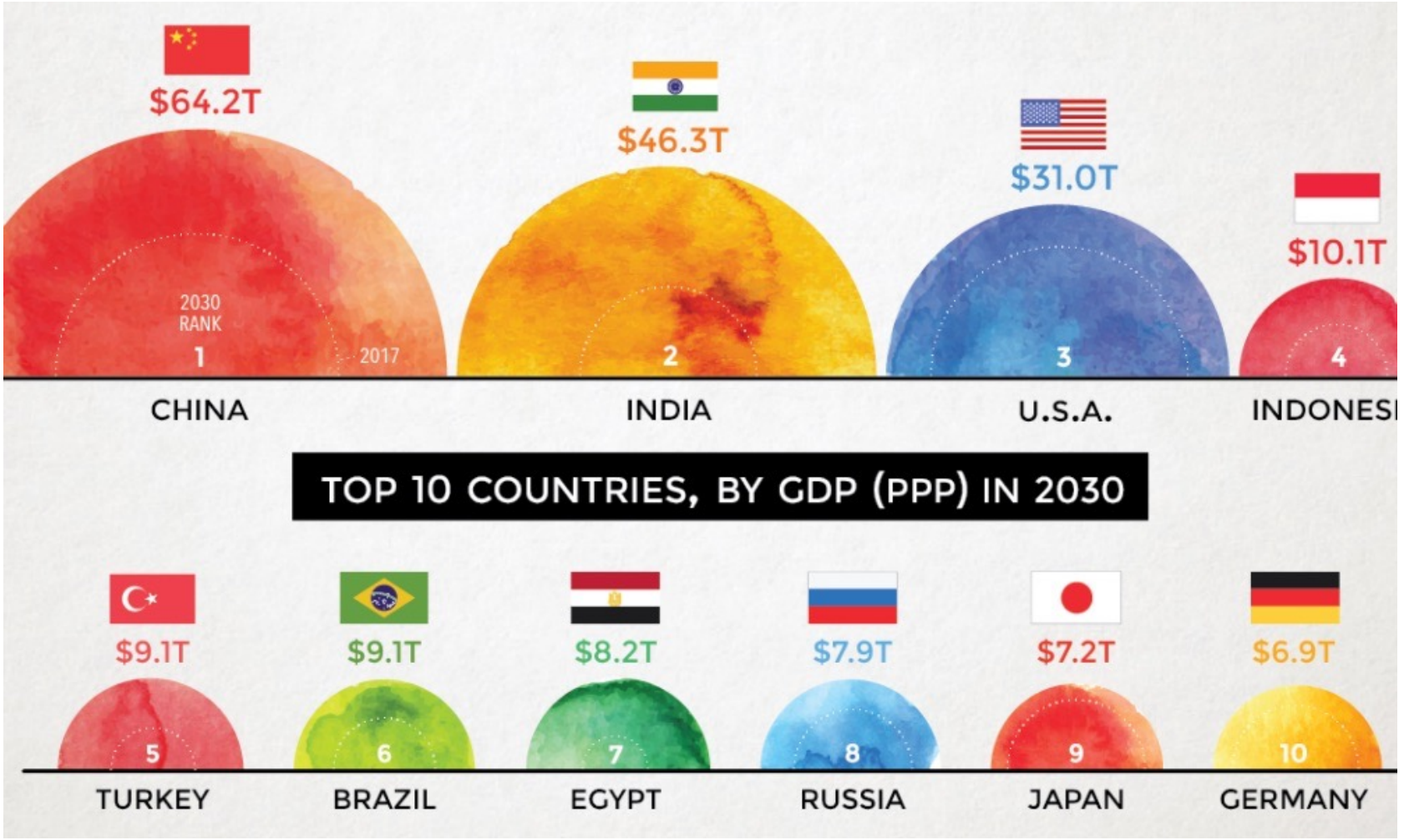
Fifty-Seven Member of OIC

Population- 1.82 Billion
GDP - $27.95 Trillion (est. 2019)
PPP- $19,500 (est.)

Targeted Data Analysis

Islamic Cooperative Population

```
In [52]: df= International_Database.iloc[0:227]

In [53]: rows= [1,2,3,16, 17, 22, 26, 36, 40, 44, 56, 60, 72, 73, 85, 86, 94, 95, 96, 104, 105, 111, 112, 115, 118, 125, 126, 127, 130, 139, 140, 1

In [54]: umm_population= df["Population"]

In [55]: selected_population= umm_population.loc[rows].sum()

In [56]: print(selected_population)
1827880190

In [57]: ratio= selected_population / world_population

In [58]: print(f"{ratio: .2f}")
 0.24
```


$64.2T
2030 RANK
1
2017
CHINA
$46.3T
2
INDIA
$31.0T
3
U.S.A.
$10.1T
4
INDONESI
TOP 10 COUNTRIES, BY GDP (PPP) IN 2030
$9.1T
5
TURKEY
$9.1T
6
BRAZIL
$8.2T
7
EGYPT
$7.9T
8
RUSSIA
$7.2T
9
JAPAN
$6.9T
10
GERMANY

THANK YOU