

```
In [2]: #predefine code for image
from IPython.display import Image
Image(filename='healthy.jpg')
#predefine code end
```

Out[2]:



## Activity - 1 Clean the data and show which top 10 countries has the highest Undernourished rate as compared with their Population

```
In [21]: #import the required packages
import pandas as pd
import matplotlib.pyplot as plt

#Read the csv file.
df = pd.read_csv("COVID-19 Healthy Diet Dataset.csv")
df.replace("<2.5", int(3), inplace=True)
df["Undernourished"] = df["Undernourished"].astype(float)
group_country = df.groupby('Country')[['Undernourished', 'Population']].sum().reset
group_country = group_country.sort_values(by="Undernourished", ascending=False)
top_10 = group_country.head(10)
top_10["percentage_number"] = top_10["Undernourished"]/100*top_10["Population"]
total_population = top_10["Population"]
percentage_number = top_10["percentage_number"]
print(top_10)
```

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country = top_10["Country"]
plt.figure(figsize=(10,10))
plt.title("highest Undernourished rate")
plt.bar(country, total_population, bottom=percentage_number, color="blue", label="c
plt.bar(country, percentage_number, color="red", label="country Undernourished")
plt.xticks(rotation="vertical")
plt.legend()
plt.xlabel("Country")
plt.ylabel("PErcentage")
plt.show()

```

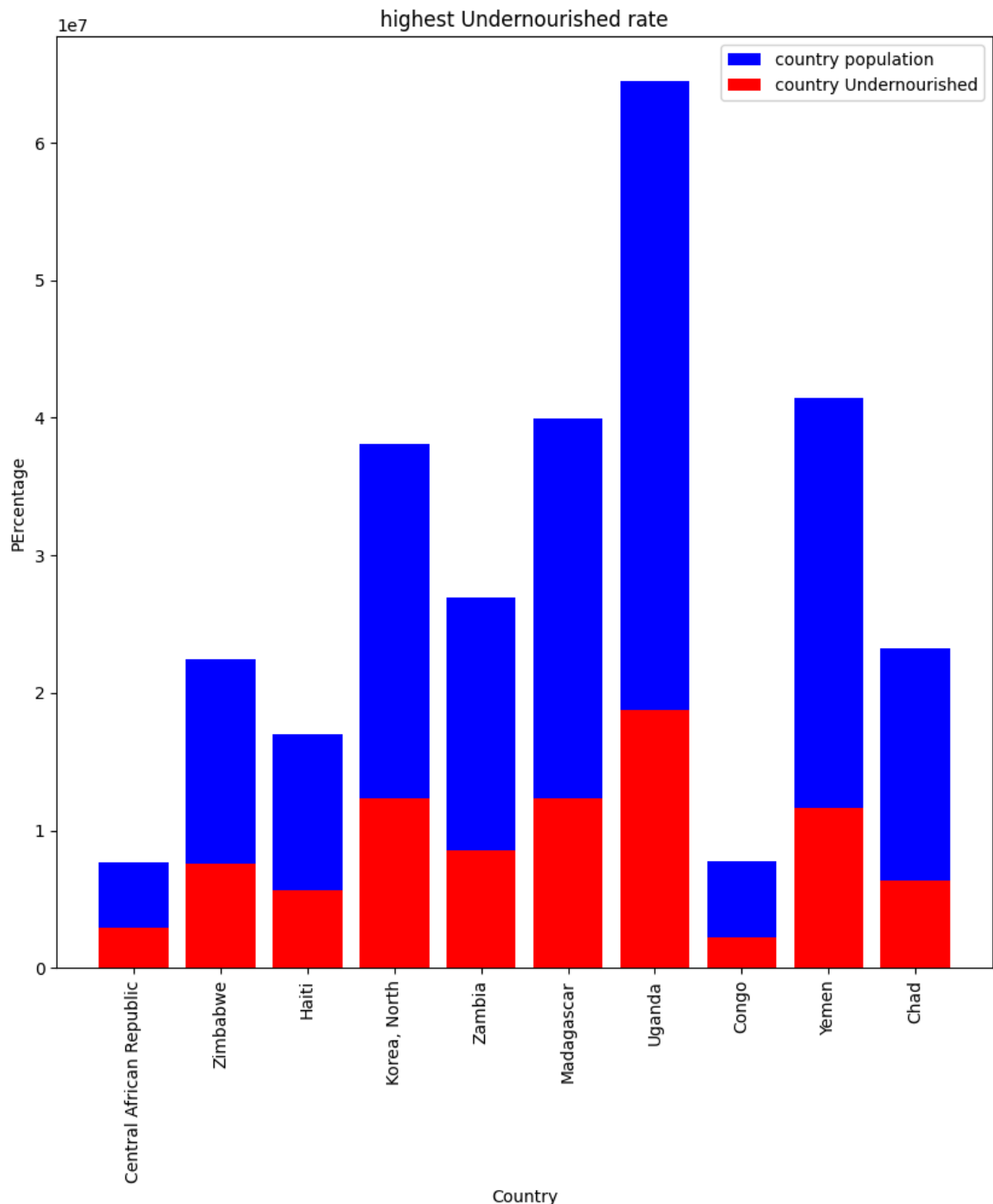
C:\Users\rohit\AppData\Local\Temp\ipykernel\_3856\2674820293.py:12: SettingWithCopyWarning:

A value is trying to be set on a copy of a slice from a DataFrame.  
Try using `.loc[row_indexer,col_indexer] = value` instead

See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy)

```
top_10["percentage_number"] = top_10["Undernourished"]/100*top_10["Population"]
```

	Country	Undernourished	Population	percentage_number
27	Central African Republic	59.6	4830000.0	2878680.0
169	Zimbabwe	51.3	14863000.0	7624719.0
64	Haiti	49.3	11403000.0	5621679.0
81	Korea, North	47.8	25779000.0	12322362.0
168	Zambia	46.7	18384000.0	8585328.0
92	Madagascar	44.4	27691000.0	12294804.0
156	Uganda	41.0	45741000.0	18753810.0
32	Congo	40.3	5518000.0	2223754.0
167	Yemen	38.9	29826000.0	11602314.0
28	Chad	37.5	16877000.0	6328875.0



## Activity - 2 Show a comparison between Meat and Vegetables consumption across the countries

```
In [23]: import pandas as pd
import matplotlib.pyplot as plt

#Read the csv file.
```

```
df = pd.read_csv("COVID-19 Healthy Diet Dataset.csv")
df2 = df.sort_values(by="Meat",ascending=False)
df2 = df.sort_values(by="Vegetables",ascending=False)
plt.figure(figsize=(10,10))
plt.hist(df2["Meat"].head(50), bins=10, label="Meat")
plt.hist(df2["Vegetables"].head(50), bins=10, label="Vegetables")
plt.title("Meat VS Vegetables")
plt.legend()
plt.show()
```

