

```
#Import Necessary Libraries
```

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

```
df = pd.read_csv(r"C:\\Users\\jayaraman\\OneDrive\\Pictures\\Desktop\\
Data science intership\\bank\\bank.csv")
df.head()
```

```
age;"job";"marital";"education";"default";"balance";"housing";"loan";"
contact";"day";"month";"duration";"campaign";"pdays";"previous";"poutc
ome";"y"
```

```
0 30;"unemployed";"married";"primary";"no";1787;...
```

```
1 33;"services";"married";"secondary";"no";4789;...
```

```
2 35;"management";"single";"tertiary";"no";1350;...
```

```
3 30;"management";"married";"tertiary";"no";1476...
```

```
4 59;"blue-collar";"married";"secondary";"no";0;...
```

```
df.tail()
```

```
age;"job";"marital";"education";"default";"balance";"housing";"loan";"
contact";"day";"month";"duration";"campaign";"pdays";"previous";"poutc
ome";"y"
```

```
4516 33;"services";"married";"secondary";"no";-333;...
```

```
4517 57;"self-employed";"married";"tertiary";"yes";...
```

```
4518 57;"technician";"married";"secondary";"no";295...
```

```
4519 28;"blue-collar";"married";"secondary";"no";11...
```

```
4520 44;"entrepreneur";"single";"tertiary";"no";113...
```

```
df.shape
```

```
(4521, 1)
```

```
df.columns
```

```
Index(['age;"job";"marital";"education";"default";"balance";"housing";
"loan";"contact";"day";"month";"duration";"campaign";"pdays";"previous
";"poutcome";"y"'], dtype='object')
```

```

df.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 4521 entries, 0 to 4520
Data columns (total 1 columns):
#   Column
Non-Null Count  Dtype
---  ---
0
age;"job";"marital";"education";"default";"balance";"housing";"loan";"
contact";"day";"month";"duration";"campaign";"pdays";"previous";"poutc
ome";"y" 4521 non-null    object
dtypes: object(1)
memory usage: 35.4+ KB

df.info()

<class 'pandas.core.frame.DataFrame'>
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0
age;"job";"marital";"education";"default";"balance";"housing";"loan";"
contact";"day";"month";"duration";"campaign";"pdays";"previous";"poutc
ome";"y" 4521 non-null    object
dtypes: object(1)
memory usage: 35.4+ KB

df.describe()

age;"job";"marital";"education";"default";"balance";"housing";"loan";"
contact";"day";"month";"duration";"campaign";"pdays";"previous";"poutc
ome";"y"
count                                     4521
unique                                   4521
top      30;"unemployed";"married";"primary";"no";1787;...
freq                                     1

df.isnull().sum()

age;"job";"marital";"education";"default";"balance";"housing";"loan";"
contact";"day";"month";"duration";"campaign";"pdays";"previous";"poutc

```

```
ome";"y"    0
dtype: int64

plt.figure(figsize = (16,9))
plt.hist(x = "job",data = df)

(array([0., 0., 0., 0., 0., 1., 0., 0., 0., 0.]),
 array([-0.5, -0.4, -0.3, -0.2, -0.1,  0. ,  0.1,  0.2,  0.3,  0.4,
        0.5])),
<BarContainer object of 10 artists>)
```

