In [1]:
```
# Make sure pandas is loaded
import pandas as pd
```

In [2]:
```
# Note that pd.read_csv is used because we imported pandas as pd
surveys_df = pd.read_csv("surveys.csv")
```

In [3]:
```
type(surveys_df)
```

Out[3]:
```
pandas.core.frame.DataFrame
```

In [4]:
```
surveys_df['sex'].dtype
```

Out[4]:
```
dtype('O')
```

In [5]:
```
surveys_df['record_id'].dtype
```

Out[5]:
```
dtype('int64')
```

In [6]:
```
surveys_df.dtypes
```

Out[6]:
```
record_id            int64
month                int64
day                  int64
year                 int64
plot_id              int64
species_id          object
sex                 object
hindfoot_length    float64
weight             float64
dtype: object
```

In [7]:
```
print(5+5)
```

```
10
```

In [8]:
```
print(24-4)
```

```
20
```

In [9]:
```
print(5/9)
```

```
0.5555555555555556
```

In [10]:
```
print(10/3)
```

```
3.3333333333333335
```

In [11]:
```
# Convert a to an integer
a = 7.83
int(a)
```

Out[11]:
```
7
```

In [12]:
```
# Convert b to a float
b = 7
float(b)
```

Out[12]: 7.0

In [13]:
```
# Convert the record_id field from an integer to a float
surveys_df['record_id'] = surveys_df['record_id'].astype('float64')
```

In [14]:
```
surveys_df['record_id'].dtype
```

Out[14]: dtype('float64')

In [15]:
```
surveys_df['plot_id'].astype("float")
```

Out[15]:

0	2.0
1	3.0
2	2.0
3	7.0
4	3.0
5	1.0
6	2.0
7	1.0
8	1.0
9	6.0
10	5.0
11	7.0
12	3.0
13	8.0
14	6.0
15	4.0
16	3.0
17	2.0
18	4.0
19	11.0
20	14.0
21	15.0
22	13.0
23	13.0
24	9.0
25	15.0
26	15.0
27	11.0
28	11.0
29	10.0
...	...
35519	9.0
35520	9.0
35521	9.0
35522	9.0
35523	9.0
35524	9.0
35525	8.0
35526	13.0
35527	13.0
35528	13.0
35529	13.0
35530	13.0
35531	14.0
35532	14.0
35533	14.0
35534	14.0
35535	14.0
35536	14.0
35537	15.0
35538	15.0
35539	15.0
35540	15.0
35541	15.0
35542	15.0
35543	15.0
35544	15.0
35545	15.0
35546	10.0
35547	7.0

```
35548      5.0
Name: plot_id, Length: 35549, dtype: float64
```

In [16]:
```
surveys_df['weight'].mean()
```

Out[16]:
```
42.672428212991356
```

In [17]:
```
len(surveys_df[surveys_df['weight'].isna()])
```

Out[17]:
```
3266
```

In [18]:
```
len(surveys_df[surveys_df['weight'] > 0])
```

Out[18]:
```
32283
```

In [19]:
```
df1 = surveys_df.copy()
# Fill all NaN values with 0
df1['weight'] = df1['weight'].fillna(0)
```

In [20]:
```
df1['weight'].mean()
```

Out[20]:
```
38.751976145601844
```

In [21]:
```
df1['weight'] = surveys_df['weight'].fillna(surveys_df['weight'].mean())
```

In [23]:
```
surveys_df = pd.read_csv("surveys.csv")
```

In [24]:
```
df_na = surveys_df.dropna()
```

In [26]:
```
# Write DataFrame to CSV
df_na.to_csv('surveys_complete.csv', index=False)
```

In [ ]:
```

```