Zipf Distribution

Zipf distritutions are used to sample data based on zipf's law.

Zipf's Law: In a collection, the nth common term is 1/n times of the most common term. E.g. the 5th most common word in English occurs nearly 1/5 times as often as the most common word.

It has two parameters:

a - distribution parameter.

$size$ - The shape of the returned array.

Example

Draw out a sample for zipf distribution with distribution parameter 2 with size 2x3:

```python
from numpy import random

x = random.zipf(a=2, size=(2, 3))

print(x)
```

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Visualization of Zipf Distribution

Sample 1000 points but plotting only ones with value < 10 for more meaningful chart.
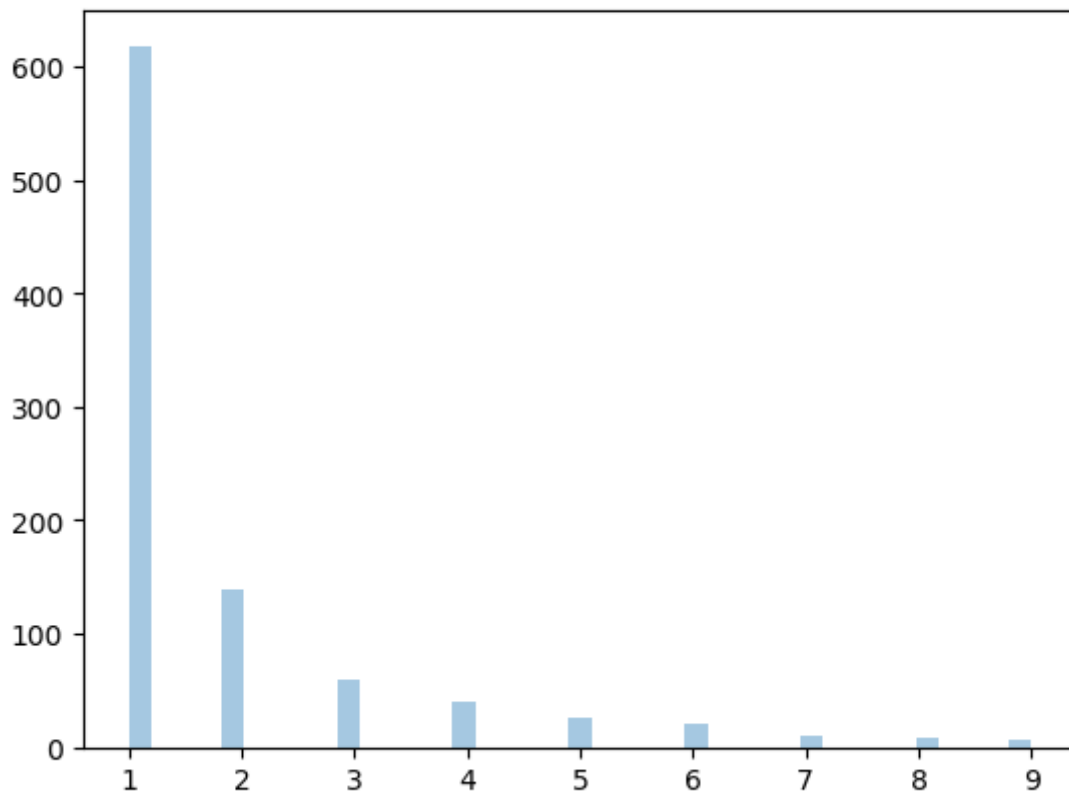
Example

```python
from numpy import random
import matplotlib.pyplot as plt
import seaborn as sns

x = random.zipf(a=2, size=1000)
sns.distplot(x[x<10], kde=False)

plt.show()
```
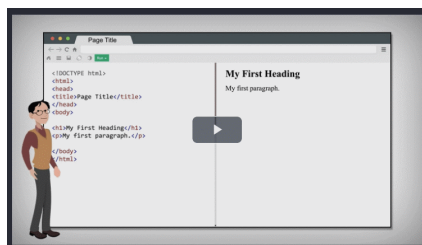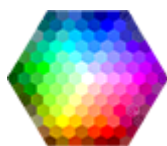
Result

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