

A] Write a Python program to create a Pie plot to get the frequency of the three species of the Iris data (Use iris.csv)

In [2]:

```
# import libraries
import pandas as pd
import matplotlib.pyplot as plt
```

In [3]:

```
# read Iris dataset
df=pd.read_csv("D://Datasets/Iris.csv")
df
```

Out[3]:

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species
0	1	5.1	3.5	1.4	0.2	Iris-setosa
1	2	4.9	3.0	1.4	0.2	Iris-setosa
2	3	4.7	3.2	1.3	0.2	Iris-setosa
3	4	4.6	3.1	1.5	0.2	Iris-setosa
4	5	5.0	3.6	1.4	0.2	Iris-setosa
...
145	146	6.7	3.0	5.2	2.3	Iris-virginica
146	147	6.3	2.5	5.0	1.9	Iris-virginica
147	148	6.5	3.0	5.2	2.0	Iris-virginica
148	149	6.2	3.4	5.4	2.3	Iris-virginica
149	150	5.9	3.0	5.1	1.8	Iris-virginica

150 rows × 6 columns

In [4]:

```
# frequency count of Species attribute
data=df['Species'].value_counts()
data
```

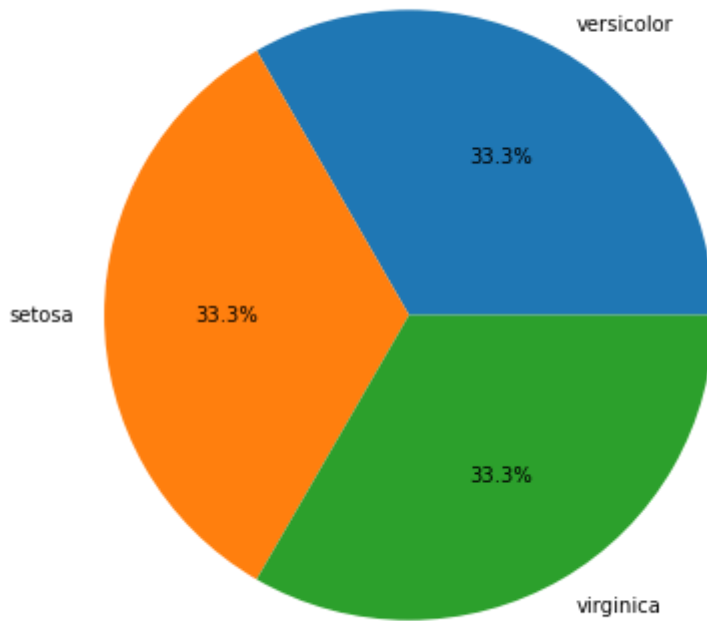
Out[4]:

```
Iris-setosa      50
Iris-virginica   50
Iris-versicolor  50
Name: Species, dtype: int64
```

In [10]:

```
# Creating plot
fig = plt.figure(figsize =(15, 7))
species=['versicolor','setosa','virginica']
plt.pie(data, labels =species,autopct='%1.1f%%' )

# show plot
plt.show()
```



B]Write a Python program to view basic statistical details of the data.(Use winequality-red.csv)

In [6]:

```
df1=pd.read_csv("D://Datasets/Winequality-red.csv")
df1
```

Out[6]:

	fixed acidity	volatile acidity	citric acid	residual sugar	chlorides	free sulfur dioxide	total sulfur dioxide	density	pH	sulphates	quality
0	7.4	0.700	0.00	1.9	0.076	11.0	34.0	0.99780	3.51	0.56	5.0
1	7.8	0.880	0.00	2.6	0.098	25.0	67.0	0.99680	3.20	0.68	5.4
2	7.8	0.760	0.04	2.3	0.092	15.0	54.0	0.99700	3.26	0.65	5.3
3	11.2	0.280	0.56	1.9	0.075	17.0	60.0	0.99800	3.16	0.58	5.4
4	7.4	0.700	0.00	1.9	0.076	11.0	34.0	0.99780	3.51	0.56	5.0
...
1594	6.2	0.600	0.08	2.0	0.090	32.0	44.0	0.99490	3.45	0.58	5.0
1595	5.9	0.550	0.10	2.2	0.062	39.0	51.0	0.99512	3.52	0.76	5.4
1596	6.3	0.510	0.13	2.3	0.076	29.0	40.0	0.99574	3.42	0.75	5.3
1597	5.9	0.645	0.12	2.0	0.075	32.0	44.0	0.99547	3.57	0.71	5.0
1598	6.0	0.310	0.47	3.6	0.067	18.0	42.0	0.99549	3.39	0.66	5.0

1599 rows × 12 columns



In [7]:

```
df1.describe()
```

Out[7]:

	fixed acidity	volatile acidity	citric acid	residual sugar	chlorides	free sulfur dioxide	total sulfur dioxide	quality
count	1599.000000	1599.000000	1599.000000	1599.000000	1599.000000	1599.000000	1599.000000	1599.000000
mean	8.319637	0.527821	0.270976	2.538806	0.087467	15.874922	46.400000	5.436984
std	1.741096	0.179060	0.194801	1.409928	0.047065	10.460157	32.816198	0.705818
min	4.600000	0.120000	0.000000	0.900000	0.012000	1.000000	6.000000	4.0
25%	7.100000	0.390000	0.090000	1.900000	0.070000	7.000000	22.000000	5.0
50%	7.900000	0.520000	0.260000	2.200000	0.079000	14.000000	38.000000	5.0
75%	9.200000	0.640000	0.420000	2.600000	0.090000	21.000000	62.000000	5.0
max	15.900000	1.580000	1.000000	15.500000	0.611000	72.000000	289.000000	8.0



In [8]:

```
df.shape
```

Out[8]:

```
(150, 6)
```

In []:

In []: