Peer Assignment
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Assignment (3.1)

1. import **pandas**.

```
[1]  import pandas as pd
     ✓ 0.3s
```

2. Import **Iris dataset**.

```
[2]  data_set = pd.read_csv("../../datasets/Iris.csv")
     data_set
     ✓ 0.0s
```

	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

3. Then we find **uniqueness** in **Species**.

```
[3]  unique_values = data_set['Species'].unique()
     unique_values
     ✓ 0.0s
...  array(['Iris-setosa', 'Iris-versicolor', 'Iris-virginica'], dtype=object)
```

4. Then find **length**.

```
[4]  len(data_set['Species'].unique())
     ✓ 0.0s
...  3
```

5. Then we map **unique data** to **numeric label**.

```
[5]  data_map = {}
     for i, value in enumerate(unique_values):
         data_map[value] = i

     data_map
     ✓ 0.0s
...  {'Iris-setosa': 0, 'Iris-versicolor': 1, 'Iris-virginica': 2}
```

6. Then we **create a list** in which we add all **label** according to **Species**.

```
[6]  data_map_list = []
     for specie in data_set["Species"]:
         if specie in data_map:
             data_map_list.append(data_map[specie])
     ✓ 0.0s
```

7. Now, we add a column in our **dataset** and add **data_map_list** in it.

```
data_set["encoded label"] = data_map_list
data_set
```

[11] ✓ 0.0s

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

150 rows × 8 columns

8. To verify our **label data** we **check** some **rows**.

```
data_set.loc[10:10 , :]
```

[12] ✓ 0.0s

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species	encoded lable	encoded label
10	11	5.4	3.7	1.5	0.2	Iris-setosa	0	0

```
data_set.loc[60:60 , :]
```

[13] ✓ 0.0s

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species	encoded lable	encoded label
60	61	5.0	2.0	3.5	1.0	Iris-versicolor	1	1

```
data_set.loc[145:145 , :]
```

[14] ✓ 0.0s

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species	encoded lable	encoded label
145	146	6.7	3.0	5.2	2.3	Iris-virginica	2	2