In [18]:
```
import matplotlib.pyplot as plt
import seaborn as sns
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import classification_report,confusion_matrix
from sklearn.metrics import accuracy_score
from sklearn.model_selection import train_test_split
```

In [9]:
```
data  = sns.load_dataset("iris").iloc[0:100,:]
data.head()
```

Out[9]:

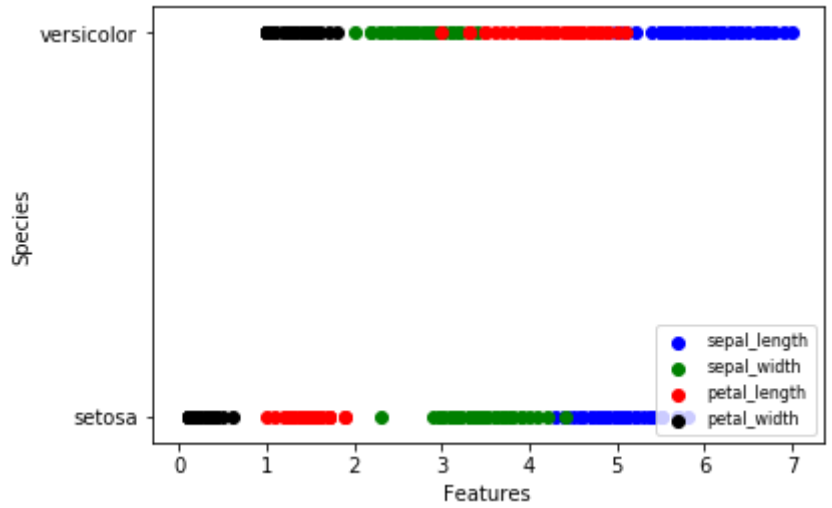
	sepal_length	sepal_width	petal_length	petal_width	species
0	5.1	3.5	1.4	0.2	setosa
1	4.9	3.0	1.4	0.2	setosa
2	4.7	3.2	1.3	0.2	setosa
3	4.6	3.1	1.5	0.2	setosa
4	5.0	3.6	1.4	0.2	setosa

In [12]:
```
data['species'].value_counts()
```

Out[12]:
```
setosa        50
versicolor    50
Name: species, dtype: int64
```

In [13]:

```
plt.xlabel('Features')
plt.ylabel('Species')

pltX = data.loc[:, 'sepal_length']
pltY = data.loc[:,'species']
plt.scatter(pltX, pltY, color='blue', label='sepal_length')

pltX = data.loc[:, 'sepal_width']
pltY = data.loc[:,'species']
plt.scatter(pltX, pltY, color='green', label='sepal_width')

pltX = data.loc[:, 'petal_length']
pltY = data.loc[:,'species']
plt.scatter(pltX, pltY, color='red', label='petal_length')

pltX = data.loc[:, 'petal_width']
pltY = data.loc[:,'species']
plt.scatter(pltX, pltY, color='black', label='petal_width')

plt.legend(loc=4, prop={'size':8})
plt.show()
```



In [14]:
```
X = data.drop('species',1)
y = data['species']
X_train,X_test,y_train,y_test = train_test_split(X,y,stratify= data['species'])
```

In [7]:
```
lm = LogisticRegression()
```

In [16]:
```
lm.fit(X_train,y_train)
```

Out[16]:
```
LogisticRegression()
```

In [19]:
```
y_pred = lm.predict(X_test)
print(confusion_matrix(y_pred,y_test))
```

```
[[13  0]
 [ 0 12]]
```

In [22]:
```
print(classification_report(y_pred,y_test))
```

```
              precision    recall  f1-score   support

      setosa       1.00      1.00      1.00        13
  versicolor       1.00      1.00      1.00        12

    accuracy                           1.00        25
   macro avg       1.00      1.00      1.00        25
weighted avg       1.00      1.00      1.00        25
```

In [ ]:
```
1
```