

In [89]:

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt

data = pd.read_csv("veriler.csv")
Y = data["cinsiyet"].values
X1 = data["boy"].values
X2 = data["yas"].values
data
```

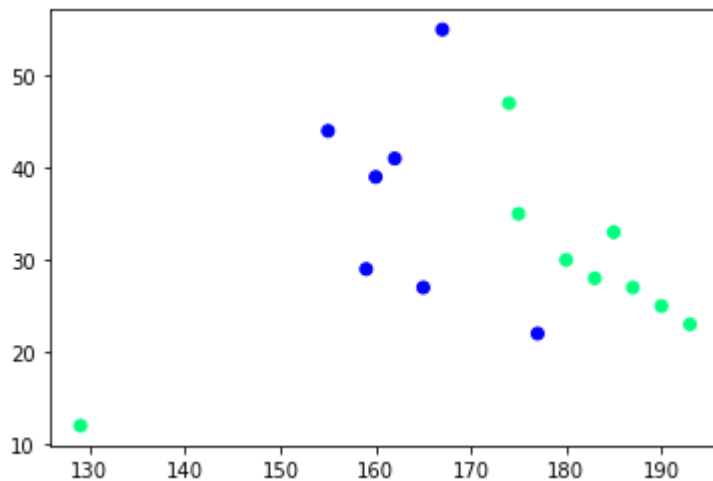
Out[89]:

	boy	yas	cinsiyet
0	129	12	1
1	180	30	1
2	190	25	1
3	175	35	1
4	177	22	0
5	185	33	1
6	165	27	0
7	155	44	0
8	160	39	0
9	162	41	0
10	167	55	0
11	174	47	1
12	193	23	1
13	187	27	1
14	183	28	1
15	159	29	0

In [90]:

```
plt.scatter(X1,X2,c=Y, cmap='winter')
```

Out[90]: <matplotlib.collections.PathCollection at 0x251469b77f0>



In [91]:

```
X_12 = data.drop("cinsiyet",axis=1)
X_12
```

Out[91]:

	boy	yas
0	129	12
1	180	30
2	190	25
3	175	35
4	177	22
5	185	33
6	165	27
7	155	44
8	160	39
9	162	41
10	167	55
11	174	47
12	193	23
13	187	27
14	183	28
15	159	29

In [92]:

```
from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(X_12,Y,test_size=0.2)
```

In [93]:

```
from sklearn.svm import SVC # Support Vector Classifier
svc_model1 = SVC(kernel="linear",C=1.0) #C margin katsayısı, C ne kadar büyükse Margin o kadar
svc_model1.fit(x_train,y_train)
```

Out[93]: SVC(kernel='linear')

In [94]:

```
classes_predicted1 = svc_model1.predict(x_test)
classes_predicted1
```

Out[94]: array([1, 1, 0, 1], dtype=int64)

In [95]:

```
svc_model2 = SVC(kernel="poly",C=1.0)
svc_model2.fit(x_train,y_train)
classes_predicted2 = svc_model2.predict(x_test)
classes_predicted2
```

Out[95]: array([1, 1, 0, 1], dtype=int64)

In [96]:

```
svc_model3 = SVC(kernel="rbf",C=1.0) # radial bases
svc_model3.fit(x_train,y_train)
classes_predicted3 = svc_model3.predict(x_test)
classes_predicted3
```

Out[96]: array([1, 1, 0, 1], dtype=int64)

```
In [97]: svc_model4 = SVC(kernel="sigmoid",C=1.0)
svc_model4.fit(x_train,y_train)
classes_predicted4 = svc_model4.predict(x_test)
classes_predicted4
```

```
Out[97]: array([0, 0, 0, 0], dtype=int64)
```

```
In [98]: y_test
```

```
Out[98]: array([1, 1, 0, 1], dtype=int64)
```

```
In [99]: from sklearn.metrics import confusion_matrix
result_linear = confusion_matrix(y_test,classes_predicted1)
result_linear
```

```
Out[99]: array([[1, 0],
               [0, 3]], dtype=int64)
```

```
In [ ]:
```