Import the required libraries

```
In [1]:   1  import pandas as pd
          2  import matplotlib.pyplot as plt
          3  import seaborn as sns
          4
          5  import warnings
          6  warnings.filterwarnings('ignore')
```

Data Preparation

```
In [10]:  1  from sklearn import datasets
          2
          3  diabetes_dict = datasets.load_diabetes()
```

```
In [16]:  1  inp = pd.DataFrame(diabetes_dict.data, columns = diabetes_dict.feature_names
          2  out = pd.DataFrame(diabetes_dict.target, columns = ['Diabetic'])
          3
          4  df = pd.DataFrame(pd.concat([inp,out], axis = 1))
```

```
In [18]:  1  df.head(3)
```

Out[18]:

	age	sex	bmi	bp	s1	s2	s3	s4	s5
0	0.038076	0.050680	0.061696	0.021872	-0.044223	-0.034821	-0.043401	-0.002592	0.019907
1	-0.001882	-0.044642	-0.051474	-0.026328	-0.008449	-0.019163	0.074412	-0.039493	-0.068332
2	0.085299	0.050680	0.044451	-0.005670	-0.045599	-0.034194	-0.032356	-0.002592	0.002861

train_test_split

```
In [19]:  1  from sklearn.model_selection import train_test_split
          2
          3  X = df.drop('Diabetic', axis = 1)
          4  y = df['Diabetic']
          5  X_train, X_test, y_train, y_test = train_test_split(X,y, random_state = 42,
```
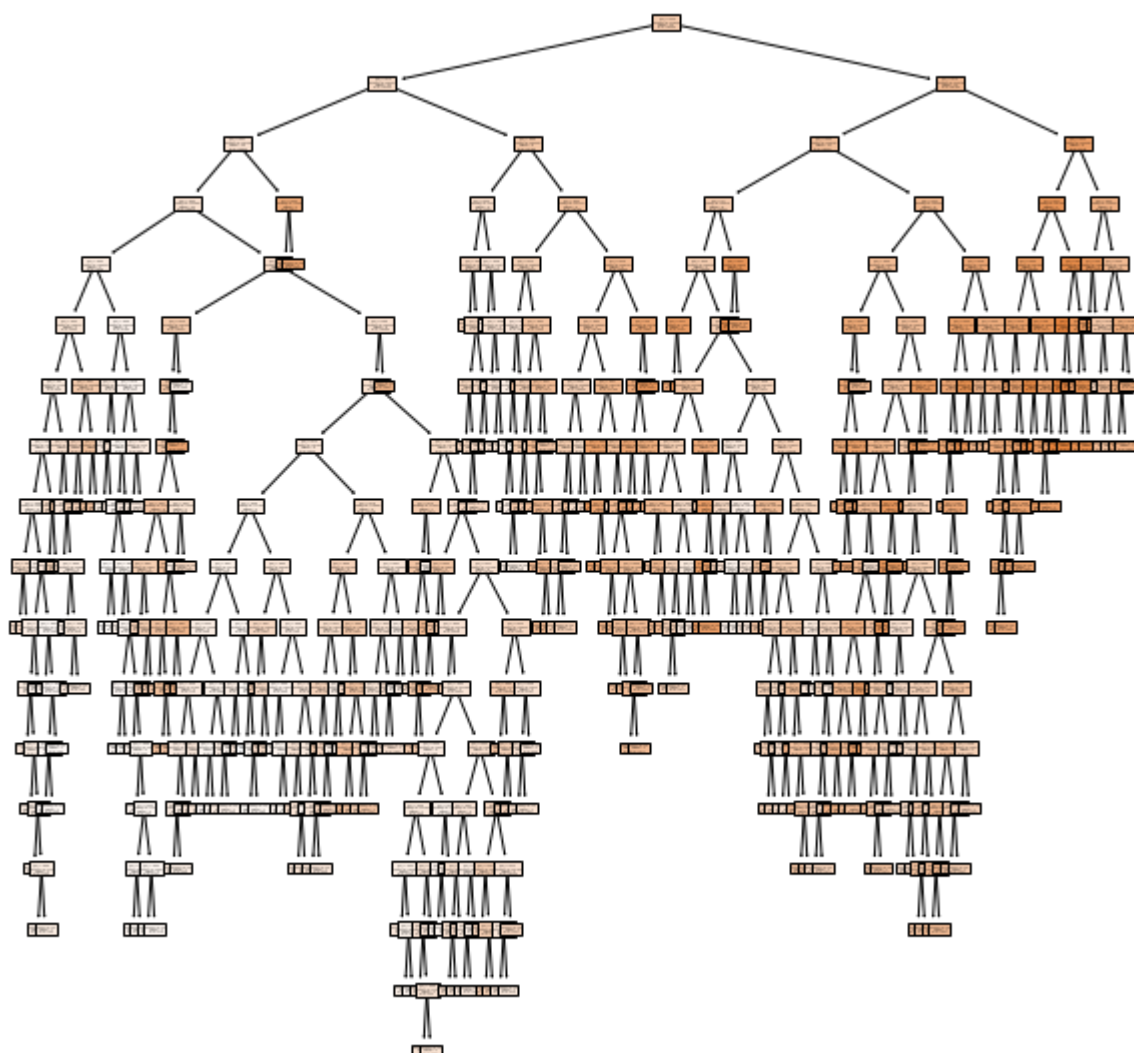
DecisionTreeRegressor

```
In [20]:  1  from sklearn.tree import DecisionTreeRegressor, plot_tree
```

In [21]:
```
1  dtr = DecisionTreeRegressor()
2  dtr.fit(X_train, y_train)
```

Out[21]:
```
▼ DecisionTreeRegressor

DecisionTreeRegressor()
```

Descision Tree Plot

In [25]:
```
1  %%time
2  plt.figure(figsize=(10,10))
3  plot_tree(dtr,filled=True)
4  plt.show()
```

Wall time: 18.4 s

In [ ]: 1