In [1]:

```
# Decision Tree Regression

# Importing the libraries
import os
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
```

In [2]:

```
os.chdir("D:/My ML Simulations/My_ML_Work/Part 2 - Regression/Section 6 - Polynomial Regression")
```

In [3]:

```
# Importing the dataset
dataset = pd.read_csv('Position_Salaries.csv')
X = dataset.iloc[:, 1:2].values
y = dataset.iloc[:, 2].values
```

In [4]:

```
# Splitting the dataset into the Training set and Test set
"""from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0.2, random_state = 0)"""
```

Out[4]:

```
'from sklearn.model_selection import train_test_split\nX_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0.
2, random_state = 0)'
```

In [5]:

```
# Feature Scaling
"""from sklearn.preprocessing import StandardScaler
sc_X = StandardScaler()
X_train = sc_X.fit_transform(X_train)
X_test = sc_X.transform(X_test)
sc_y = StandardScaler()
y_train = sc_y.fit_transform(y_train.reshape(-1,1))"""
```

Out[5]:

```
'from sklearn.preprocessing import StandardScaler\nsc_X = StandardScaler()\nX_train = sc_X.fit_transform(X_train)\nX_test = sc_
X.transform(X_test)\nsc_y = StandardScaler()\ny_train = sc_y.fit_transform(y_train.reshape(-1,1))'
```

In [6]:

```
# Fitting Decision Tree Regression to the dataset
from sklearn.tree import DecisionTreeRegressor
regressor = DecisionTreeRegressor(random_state = 0)
regressor.fit(X, y)
```

Out[6]:

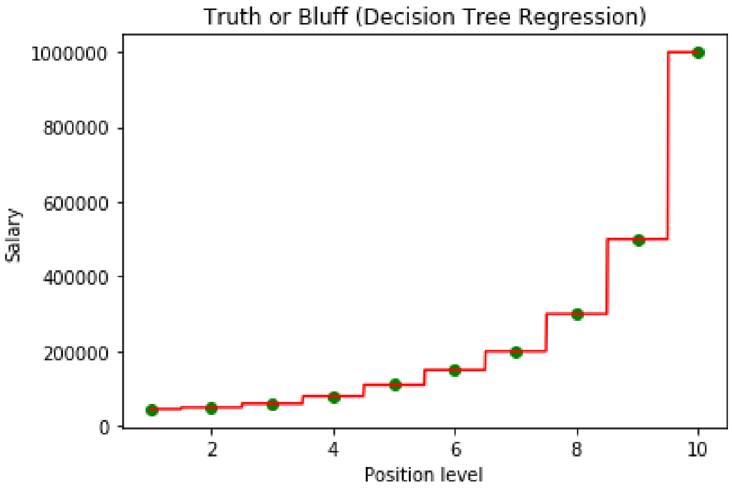
```
DecisionTreeRegressor(criterion='mse', max_depth=None, max_features=None,
                      max_leaf_nodes=None, min_impurity_decrease=0.0,
                      min_impurity_split=None, min_samples_leaf=1,
                      min_samples_split=2, min_weight_fraction_leaf=0.0,
                      presort=False, random_state=0, splitter='best')
```

In [7]:

```
# Predicting a new result
y_pred = regressor.predict([[6.5]])
```

In [9]:

```
# Visualising the Decision Tree Regression results (higher resolution)
X_grid = np.arange(min(X), max(X), 0.01)
X_grid = X_grid.reshape((len(X_grid), 1))
plt.scatter(X, y, color = 'green')
plt.plot(X_grid, regressor.predict(X_grid), color = 'red')
plt.title('Truth or Bluff (Decision Tree Regression)')
plt.xlabel('Position level')
plt.ylabel('Salary')
plt.show()
```


Truth or Bluff (Decision Tree Regression)
Salary
Position level