```
In [7]: import pandas as pd
        import numpy as np
        import matplotlib.pyplot as plt
        from sklearn.tree import DecisionTreeRegressor
```

```
In [13]: data=pd.read_csv("smartphone_activity_dataset.csv")

         data.head(10)
```

Out[13]:

	feature_1	feature_2	feature_3	feature_4	feature_5	feature_6	feature_7	feature_8	feature_9	feature_10
0	0.289	-0.02030	-0.133	-0.995	-0.983	-0.914	-0.995	-0.983	-0.924	-0.935
1	0.278	-0.01640	-0.124	-0.998	-0.975	-0.960	-0.999	-0.975	-0.958	-0.943
2	0.280	-0.01950	-0.113	-0.995	-0.967	-0.979	-0.997	-0.964	-0.977	-0.939
3	0.279	-0.02620	-0.123	-0.996	-0.983	-0.991	-0.997	-0.983	-0.989	-0.939
4	0.277	-0.01660	-0.115	-0.998	-0.981	-0.990	-0.998	-0.980	-0.990	-0.942
5	0.277	-0.01010	-0.105	-0.997	-0.990	-0.995	-0.998	-0.990	-0.996	-0.942
6	0.279	-0.01960	-0.110	-0.997	-0.967	-0.983	-0.997	-0.966	-0.983	-0.941
7	0.277	-0.03050	-0.125	-0.997	-0.967	-0.982	-0.996	-0.966	-0.983	-0.941
8	0.277	-0.02180	-0.121	-0.997	-0.961	-0.984	-0.998	-0.957	-0.984	-0.941
9	0.281	-0.00996	-0.106	-0.995	-0.973	-0.986	-0.995	-0.974	-0.986	-0.940

10 rows × 562 columns

```
In [9]: real_x= data.iloc[:,0].values
        real_y= data.iloc[:,1].values
        real_x=real_x.reshape(-1,1)
        real_y=real_y.reshape(-1,1)
```

In [10]:
```python
reg=DecisionTreeRegressor(random_state=0)
reg.fit(real_x,real_y)
```

Out[10]: DecisionTreeRegressor(random_state=0)

In [14]:
```python
y_pred = reg.predict([[0.279]])
y_pred
```

Out[14]: array([-0.0170049])

In [12]:
```python
x_grid=np.arange(min(real_x),max(real_x),0.01)
x_grid=x_grid.reshape((len(x_grid),1))
plt.scatter(real_x,real_y,color="blue")
plt.plot(x_grid, reg.predict(x_grid),color="green")
plt.title("decision tree")
plt.xlabel("pos level")
plt.ylabel("salary")
plt.show()
```