Recap:
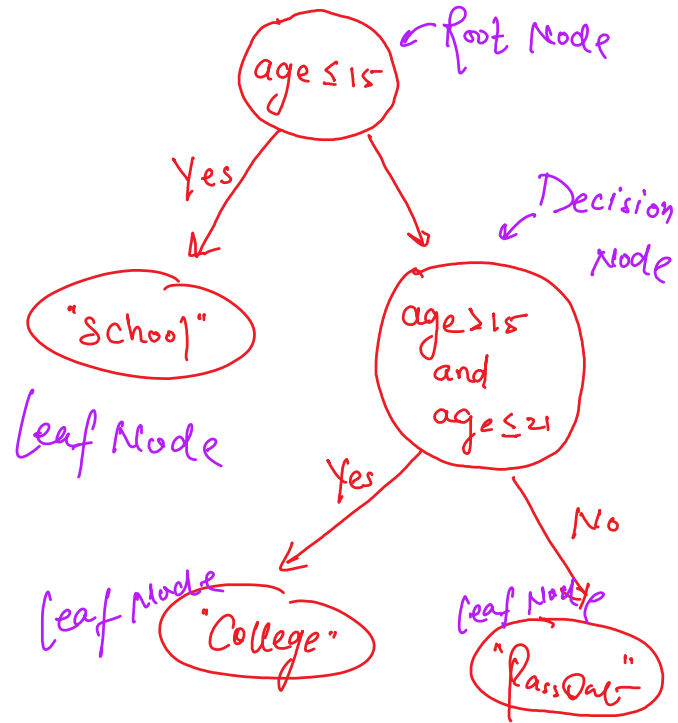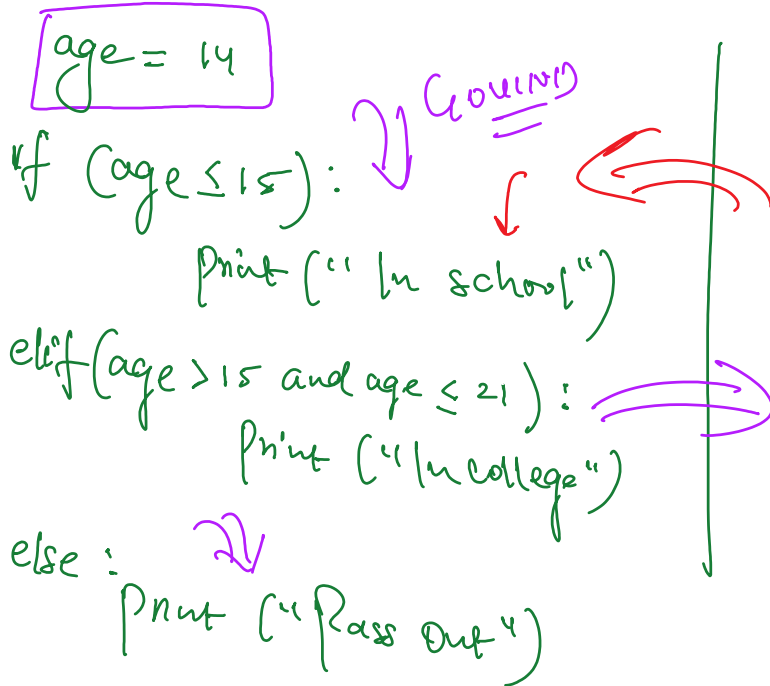
→ Implementation of Multiple linear Reg.

→ logistic Regression

→ Practical implementation

→ Play → akinator] Decision tree mc Algo

Decision Tree ML Algorithm

* It is Supervised ML Algorithm

* It is used to Solve Both Classification

and Regression Problem.

How decision tree works:

age = 14

```
if (age ≤ 15):         ⇒ (GOLINI)
        Print ("In school")
elif (age > 15 and age ≤ 21):
        Print ("In college")
else :
        Print ("Pass out")
```

age ≤ 15   ← Root Node

Yes

Decision Node

"School"

age > 15 and age ≤ 21

Leaf Node

Yes

No

Leaf Node   "College"

Leaf Node   "Pass Out"

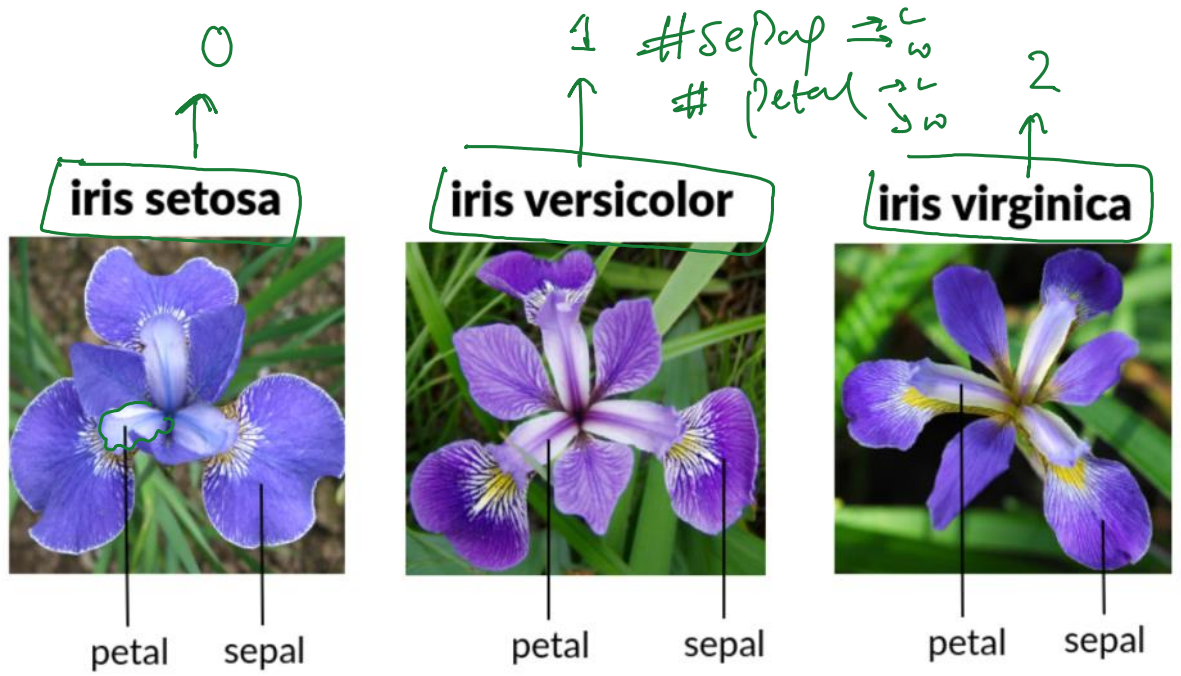\# Alkinator.com ⇒ Realife Decision Tree Model

Very Important dataset:

IRIS flower dataset :

→ It has four Input column and one Output

Sepal length	Sepal width	Petal length	Petal width	Target
—	—	—	—	—
—	—	—	—	—

IRIS → data ⇒ Input ⇒ (150 * 4)

→ target ⇒ Output ⇒ (150 * 1)

Shape ⇒ (150 * 5)

0

1   #sepal →$\frac{L}{w}$
#Petal →$\frac{L}{w}$

2

iris setosa

iris versicolor

iris virginica

petal   sepal

petal   sepal

petal   sepal

Hometask: Implement decision tree Regressor   on

Weather.csv   file.

→ Here   Humidity   is the   Output column.

```
>>> from sklearn.tree import DecisionTreeRegressor
```

⇒)   r2-score   ( )