**MACHINE LEARNING MINI PROJECT:-**

Predicting overall runs made by players by their total played matches of IPL season 2022. Using the simple linear regression algorithm via the Scikit-Learn Python library.

Sol:-

#Experiment 12

#ML Mini Project

import pandas as pd

import numpy as np

prj = pd.read\_csv("IPLData.csv")

prj

Graphical user interface, application

Description automatically generated

prj.shape

Graphical user interface, application

Description automatically generated

from sklearn.preprocessing import LabelEncoder

l=LabelEncoder()

prj.iloc[:,5]=l.fit\_transform(prj.iloc[:,5])

prj.iloc[:,6]=l.fit\_transform(prj.iloc[:,-6])

prj

Graphical user interface, application

Description automatically generated

features=["Matches\_Played","Runs"]

prj[features]

Graphical user interface, text, application

Description automatically generated

x\_Matches\_Played=prj['Matches\_Played']

y\_Runs=prj['Runs']

ax=np.array(x\_Matches\_Played).reshape((-1,1))

ax

Graphical user interface, text, application

Description automatically generated

ay=np.array(y\_Runs).reshape((-1,1))

ay

Graphical user interface, text, application

Description automatically generated

from sklearn.linear\_model import LinearRegression

model=LinearRegression()

model.fit(ax,ay)

Graphical user interface, text, application, email

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r\_sq = model.score(ax,ay)

print("coefficient of determination:",r\_sq)

Graphical user interface, text, application, email

Description automatically generated

p=print("intercept:",model.intercept\_)

q=print("slope:",model.coef\_)

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y\_pred = 0.16612694 \* 235 + 83.2992298

print(y\_pred)

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Description automatically generated