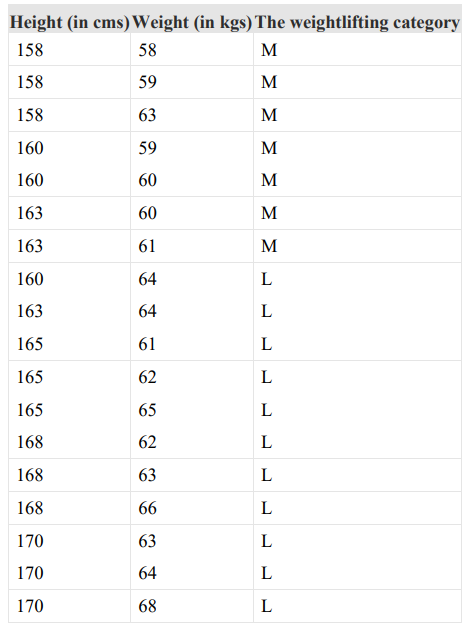
**Practical-5**

**Aim**: **Consider the following data set.**



**Write a program for KNN algorithm to find out weight lifting**

**category for height 161cm and weight 61kg.**

**Program:**

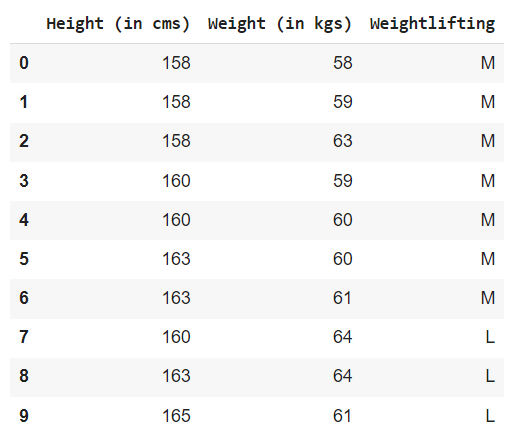
# To import libraries

import pandas as pd

# To import dataset and print first 10 records

df=pd.read\_csv("/content/Pr.csv")

df.head(10)



**#** Converting labels into list

labels\_lst=list(df['Weightlifting'])

print(labels\_lst)



# Converting features(height and weight) into list of tuples and printing first 9 elements of list

features=list(zip(df['Height (in cms)'],df['Weight (in kgs)']))

print(features[:9])



**#** Importing and training the KNN Classifier model

from sklearn.model\_selection import train\_test\_split

x\_train, x\_test, y\_train, y\_test=train\_test\_split(features, labels\_lst,test\_size=0.2,random\_state=3)

from sklearn.neighbors import KNeighborsClassifier

knn=KNeighborsClassifier(n\_neighbors=3, weights="distance", metric="euclidean")

knn.fit(x\_train,y\_train)



# Accuracy of the model

from sklearn.metrics import accuracy\_score

y\_pred=knn.predict(x\_test)

print("Accuracy of test set=",accuracy\_score(y\_test, y\_pred)\*100)



**#** predicting the class of random values of features

print(knn.predict([[161,61]]))

