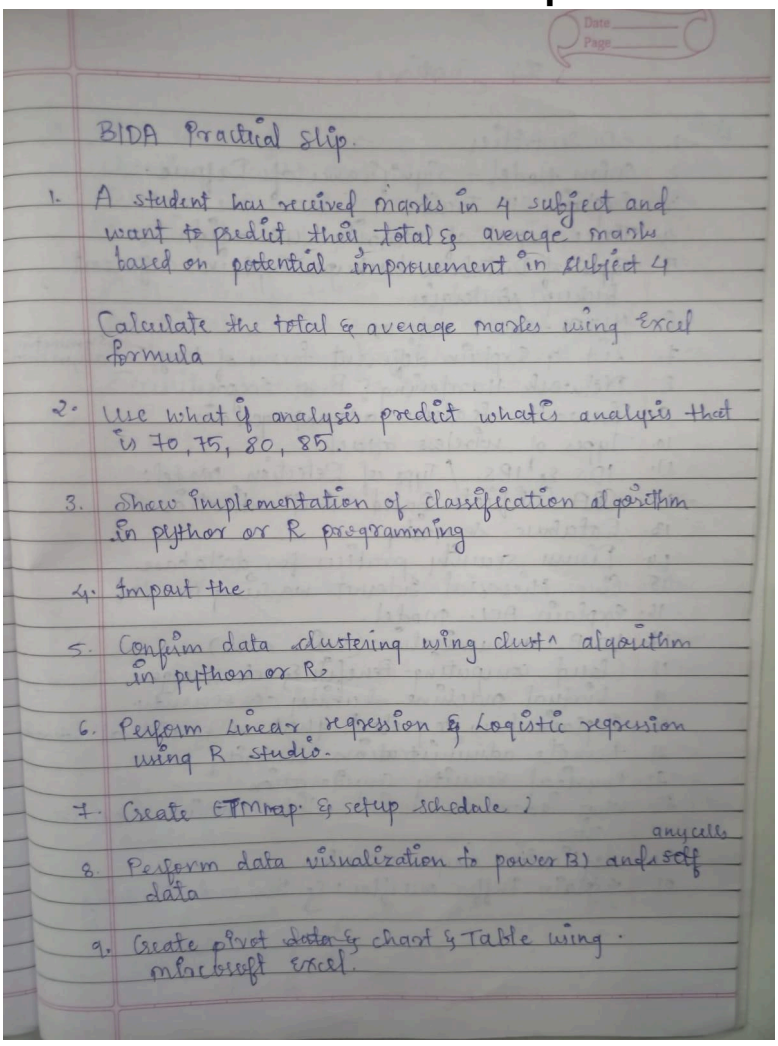
BIDA Practical Slip



BIDA Practical Slip.

1. A student has received marks in 4 subject and want to predict their total & average marks based on potential improvement in subject 4

   Calculate the total & average marks using Excel formula

2. Use what if analysis predict what is analysis that is 70, 75, 80, 85.

3. Show implementation of classification algorithm in python or R programming

4. Impart the

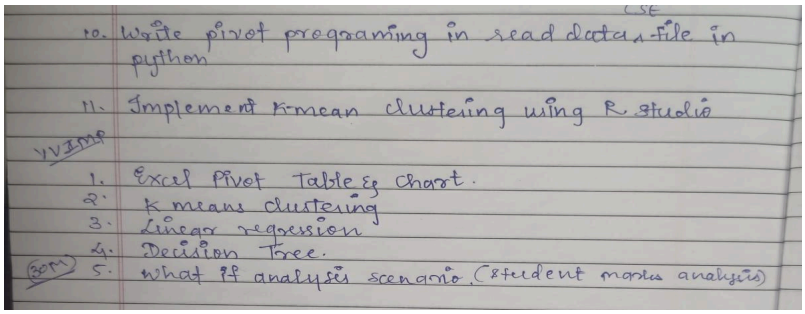
5. Confirm data clustering using clust^ algorithm in python or R.

6. Perform Linear regression & Logistic regression using R studio.

7. Create ~~E~~Tmap & setup schedule.

8. Perform data visualization to power BI and self data anycells

9. Create pivot ~~data~~ & chart & Table using Microsoft Excel.



10. Write pivot programing in read data, file in python CSE

11. Implement K-mean clustering using R studio

VVIMP

1. Excel Pivot Table & Chart.
2. K means clustering
3. Linear regression
4. Decision Tree.
5. what if analysis scenario (Student marks analysis) (30m)

1. **A student has received marks in 4 subjects and wants to predict their total & average marks based on potential improvement in subject 4.**
   Calculate the total & average marks using Excel formula.

   Use what-if analysis to predict. What's the analysis that is 70, 75, 80, 85?

Ans:

A	B	C	D	E	F	G	H
S1	S2	S3	S4	Total marks	Formula		
				type the formula =sum(A3:D3)	type the formula =average(A3:D3)		
78	85	90	88	341	85.25		

SCENARIO MANAGER -> MODIFY A SCENARIO AND SELECT THE CELLS AND MAKE CHANGES -> SHOW SUMMARY

excel

2. **Show implementation of classification algorithm in Python or R programming.**

Ans:

Practical 6

```
# Get the data points in form of a R vector.
rainfall <-c(799,1174.8,865.1,1334.6,635.4,918.5,685.5,998.6,784.2,985,882.8,1071)

# Convert it to a time series object.
rainfall.timeseries <- ts(rainfall,start = c(2012,1),frequency = 12)

# Print the timeseries data.
print(rainfall.timeseries)

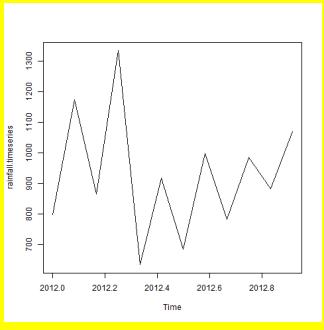
# Give the chart file a name.
png(file = "rainfall.png")

# Plot a graph of the time series.
plot(rainfall.timeseries)

# Save the file.
dev.off()
```

Output:
When we execute the above code, it produces the following result and chart −

```
Jan Feb Mar Apr May Jun Jul Aug Sep
2012 799.0 1174.8 865.1 1334.6 635.4 918.5 685.5 998.6 784.2
Oct Nov Dec
2012 985.0 882.8 1071.0
```



3. **Import the data warehouse in Microsoft Excel and create Pivot table and Pivot Chart**

Ans:

Same as question 8(almost)

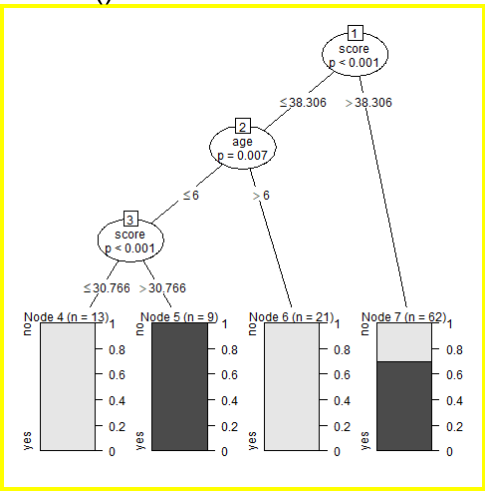
4. **Perform data clustering using cluster algorithms in Python or R.**

Ans:

Practical 7

First import package by click tools- install package- search “party” install

```
library(party)
print(head(readingSkills))
input.dat<-readingSkills[c(1:105),]
png(file="suraj.png")
output.tree<-ctree(nativeSpeaker~age+shoeSize+score,data=input.dat)
plot(output.tree)
dev.off()
```



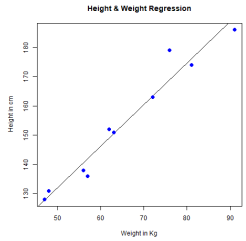
5. **Perform linear & logistic regression using R studio.**

Ans:

Practical 9 -linear

Create the predictor and response variable.

```
x <- c(151, 174, 138, 186, 128, 136, 179, 163, 152, 131)
y <- c(63, 81, 56, 91, 47, 57, 76, 72, 62, 48)
relation <- lm(y~x)
# Give the chart file a name.
png(file = "linearregression.png")
# Plot the chart.
plot(y,x,col = "blue",main = "Height & Weight Regression",
abline(lm(x~y)),cex = 1.3,pch = 16,xlab = "Weight in Kg",ylab = "Height in
cm")
# Save the file.
dev.off()
```

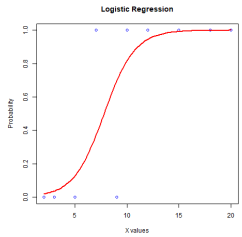


logistic regression

```
# Predictor (x) and response variable (y)
x <- c(2, 3, 5, 7, 9, 10, 12, 15, 18, 20)  # Example predictor
y <- c(0, 0, 0, 1, 0, 1, 1, 1, 1, 1)       # Binary response (0 or 1)

# Fit logistic regression model
model <- glm(y ~ x, family = binomial)

# Plot logistic regression curve
png(file = "logisticregression.png")
plot(x, y, col = "blue", main = "Logistic Regression", xlab = "X values", ylab = "Probability")
curve(predict(model, data.frame(x = x), type = "response"), add = TRUE, col = "red", lwd = 2)
dev.off()
```



6. Create ETL Map & setup schedule.

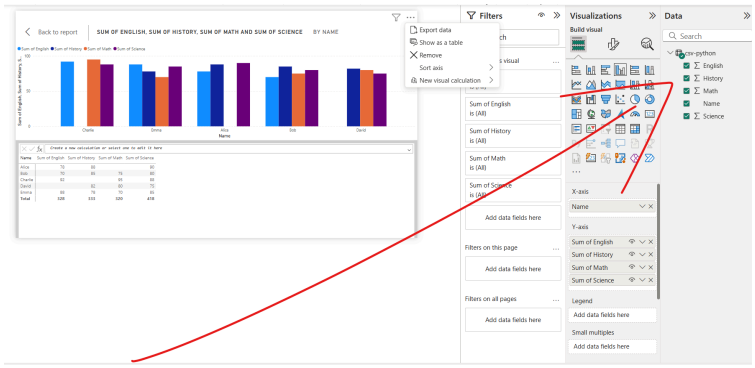
Ans: **nhi sikhaya aarya ne aur isko kuch SQL se krna hai**

7. Perform data visualization in Power BI and Sales data.

Ans:

application:B1

Import data from excel > select excel file and load data > select any chart and double click > select jo bhi chahiye > then on extreme right tick the data you want to display

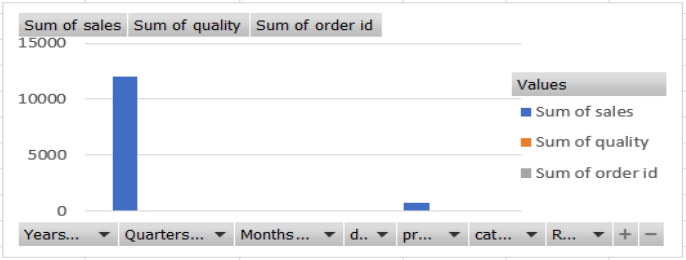


8. Create pivot table & chart & table using Microsoft Excel.

Ans:

order id	date	product	category	sales	quality	Region
101	01-03-2005	laptop	electronic	12005	2	north
102	01-03-2006	mobile	accessories	25	2	west
103	01-03-2007	mouse	electronic	800	1	east

Row Labels	Sum of sales	Sum of quality	Sum of order id
⊞ 2005	12005	2	101
⊞ 2006	25	2	102
⊞ 2007	800	1	103
Grand Total	12830	5	306



Sabse pehle upar wala table banao then usko select karo:
Go to the **"Insert"** tab and click **TABLE** -> **"PivotTable"**.

1. Choose where to place the PivotTable (New or Existing Worksheet). CLICK **EXISTING**
2. Click **OK**.
3. Drag fields into the **Rows, Columns, Values, and Filters** areas as needed. (eg order, category etc.)

2. Create a Pivot Chart

1. Click inside the PivotTable.
2. Go to **"Insert" > "PivotChart"**.
3. Choose a chart type (e.g., Column, Pie, Line).
4. Click **OK** to generate the chart.

10. Write programming in read data CSV file in Python.

Ans:

Python IDLE

Kya pata CSV file milega ki Nhi

Path acche se copy karo (/ jo hai kabhi ulta copy hota hai toh usko seedha kr dena)

(ye csv file khud se bhi bana skte hai excel me same bas **.cvs extension** se save krna hai)

Name	Math	Science	English	History
Alice	85	90	78	88
Bob	75	80	70	85
Charlie	95	88	92	
David	80	75		82
Emma	70	85	88	78

Ye cmd me type karna hai dono cheez
Cmd 1: -m ensurepip --default-pip
Sabse pehle cmd2: "pip install pandas"

Now use **IDLE and paste the code**

```
import pandas as pd
data = pd.read_csv("C:/Users/dhari/Desktop/csv-python.csv")

print("First 5 rows of the data:")
print(data.head())

print("\nMissing values in each column:")
print(data.isnull().sum())

print("\nSummary statistics for numerical columns:")
print(data.describe())
```

Output: just shows the missing values from the table

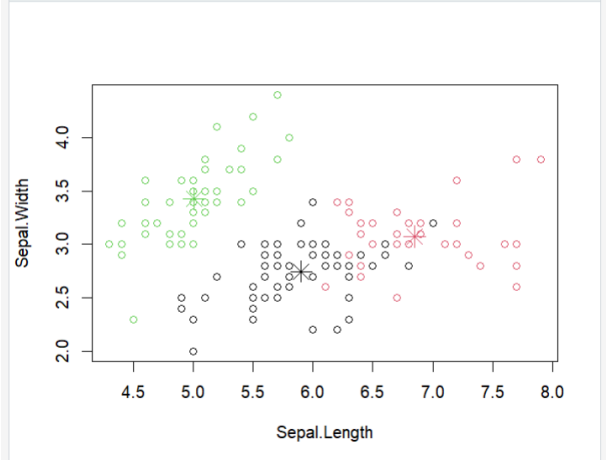
11. Implement K-means clustering using R Studio.

Ans:

RSTUDIO > FILE > NEW > RSCRIPT

Practical 8

```
newiris<-iris
newiris$Species<-NULL
(kc<- kmeans(newiris,3))
table(iris$Species,kc$cluster)
plot(newiris[c("Sepal.Length","Sepal.Width")],col=kc$cluster)
points(kc$centers[,c("Sepal.Length","Sepal.Width")],col=1:3,pch=8,cex=2)
```



V.V. IMP

1. Excel Pivot Table & Chart.

Ans:

order id	date	product	category	sales	quality	Region
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Row Labels	Sum of sales	Sum of quality	Sum of order id
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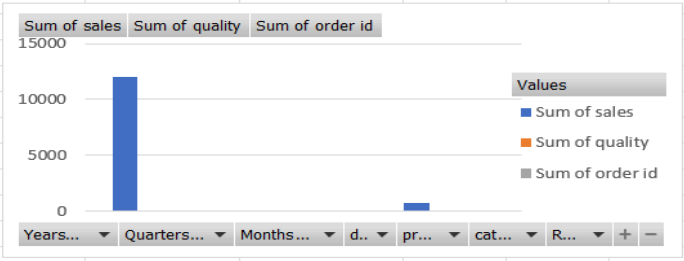

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2. K-means clustering.

Ans:

Practical 8

```
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newiris$Species<-NULL
(kc<- kmeans(newiris,3))
table(iris$Species,kc$cluster)
plot(newiris[c("Sepal.Length","Sepal.Width")],col=kc$cluster)
points(kc$centers[,c("Sepal.Length","Sepal.Width")],col=1:3,pch=8,cex=2)
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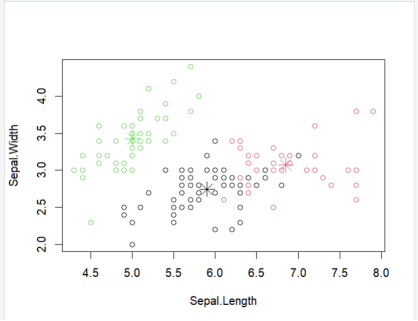

3. Linear regression.

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Practical 9

```
# Create the predictor and response variable.
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dev.off()
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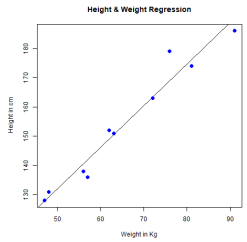

4. Decision Tree.

Ans:

Practical 7

```
library(party)
print(head(readingSkills))
input.dat<-readingSkills[c(1:105),]
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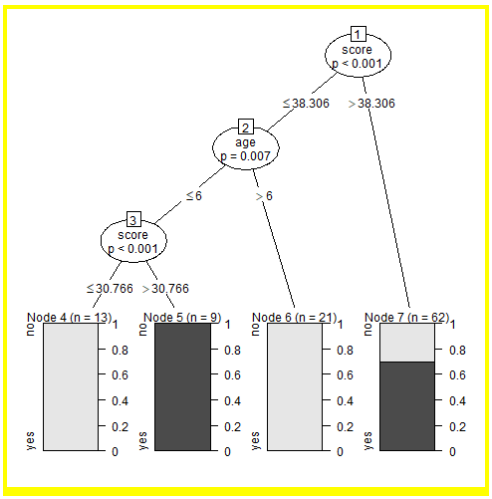

5. **What-If analysis scenario (Student marks analysis).**

Ans:

Refer Q1