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Course - MCA Section - A Sem - 1st

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Subject - Scripting Languages and R
Programming

Type of Paper - End term Practical Exam.

Ans 1-

```
<html>
```

```
<head>
```

```
<title> display data in table format </title>
```

```
</head>
```

```
<body>
```

```
<? php
```

```
$con = mysql_connect("localhost", "root", "");
```

```
if (!$con)
```

```
{ die("not connected." mysql_error());
```

```
}  
echo "connection open." "<br/>";
```

```
$sldb = mysql_select_db("const", $con);
```

```
if (!$sldb)
```

```
{ die("not found." mysql_error());
```

```
}  
echo "Database selected." "<br/>";
```

```
$query = "select * from customer";
```

```
$sql = mysql_query($query);
```

```
echo "<table border = '1'>
```

```
<tr>
```

```
<th> C_No </th>
```

```
<th> C_Name </th>
```

```
<th> Item_purchased </th>
```

```
<th> Mob-no </th>
```

```
</tr>";
```



```
while ($row = mysql_fetch_array($sql))  
{  
    echo "<tr>";  
    echo "<td>". $row['c-no']. "</td>";  
    echo "<td>". $row['c-name']. "</td>";  
    echo "<td>". $row['item-purchased']. "</td>";  
    echo "<td>". $row['mob-no']. "</td>";  
    echo "</tr>";  
    echo "</table>";  
}  
</body>  
</html>
```

Connection open

Database Selected

C_No	C_Name	Item_Purchased	Mob_no
1	Anil	Book	2147483647
2	Yogesh	Marker	2147483647

Ans 2- <!DOCTYPE html>

<html>

<head>

<title> JQuery show and hide effects

</title>

<script src="https://code.jquery.com/
jquery-1.12.4.min.js"> </script>

<style>

.button{

text-align: center;

display: inline-block;

font-size: 17px;

cursor: pointer;

</style>

<script>

\$(document).ready(function(){

 \$("#show").click(function(){

 \$("p").show();

 });

 \$("#hide").click(function(){

 \$("p").hide();

 });

});

</script>

RaviKey


```
</head>
```

```
<body>
```

```
<p> Myself ratika student of mca. I live  
in bhauwala, dehradun. <br> <br>
```

```
My hobby is playing badminton. </p>
```

```
<button class = "button" id = "hide"> Hide  
</button>
```

```
<button class = "button" id = "show">  
show </button>
```

```
</body>
```

```
</html>
```

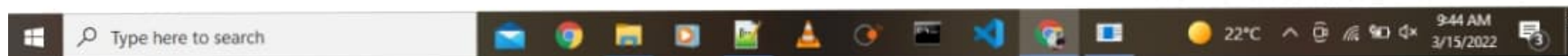
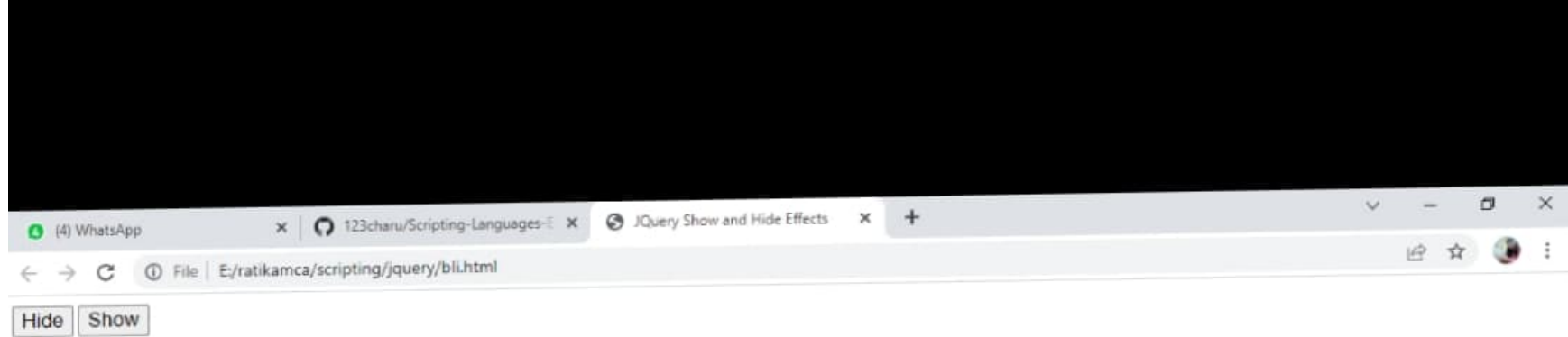


Myself ratika student of mca I live in bhauwala,dehradun.

My hobby is playing badminton.

Hide Show





R programming

Ans 3 - Analyzing the heart failure prediction.

- Reading of .csv file

```
heart <- read.csv("C:/users/ok/downloads/heart.csv")
```

```
View(heart)
```

- installing ggplot package

```
install.packages("ggplot2")
```

⇒ this package is important for plotting graphs and charts few of them will be shown below.

Histogram ⇒

```
ggplot(heart, aes(y = cholesterol, x = Age))  
+ geom_bar(stat = "identity")
```

- boxplot ⇒

```
ggplot(heart, aes(x = RestingBP, y = cholesterol))  
+ geom_boxplot()
```

- scatter plotting ⇒

```
ggplot(heart, aes(x = cholesterol, y = RestingBP))  
+ geom_point()
```

Rishi Ky

1) Head and Tail

head (heart)

tail (heart)

2) Maximum

max (heart & RestingBP)

max (heart & cholesterol)

3) Minimum

min ← min (heart & Heart Disease)

min

4) Mean

mean (heart & oldpeak)

5) Median

median (heart & cholesterol)

6) Quantile

quantile (heart & cholesterol)

quantile (heart & RestingBP)

7) Standard Deviation and Variance

sd (heart & cholesterol)

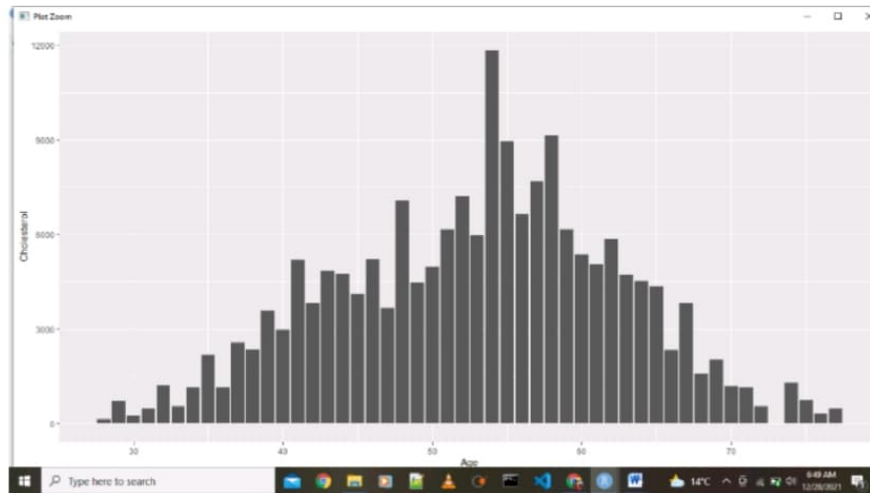
var (heart & RestingBP)

8) Summary (heart)

Ratika

- Histogram

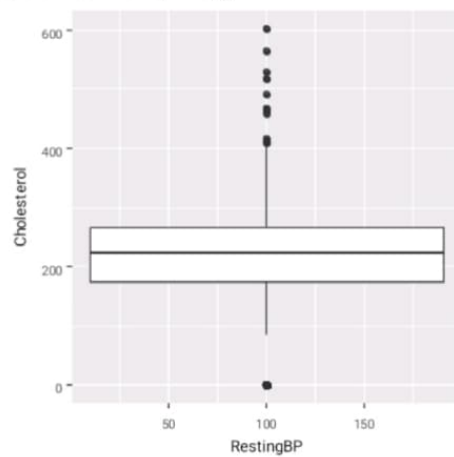
```
ggplot(heart, aes(y=Cholesterol, x=Age)) + geom_bar(stat = "identity")
```



- Boxplot

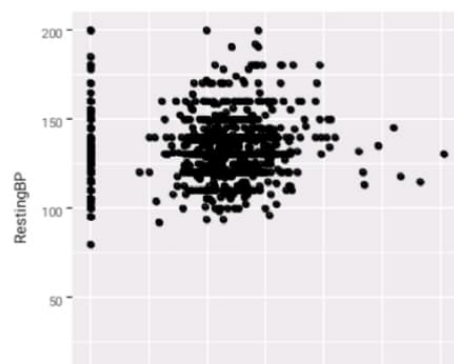
```
ggplot(heart, aes(x=RestingBP, y=Cholesterol)) +
```

```
geom_boxplot()
```



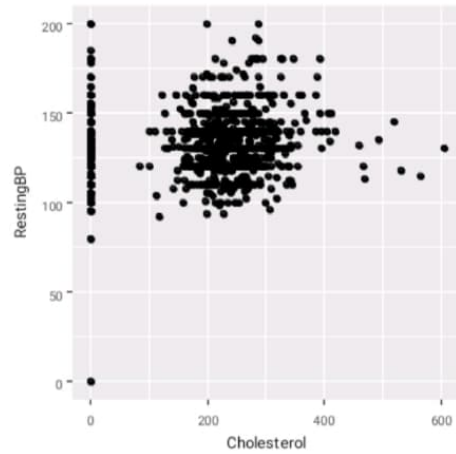
- Scatter plotting

```
ggplot(heart, aes(x =Cholesterol, y =RestingBP)) +geom_point()
```

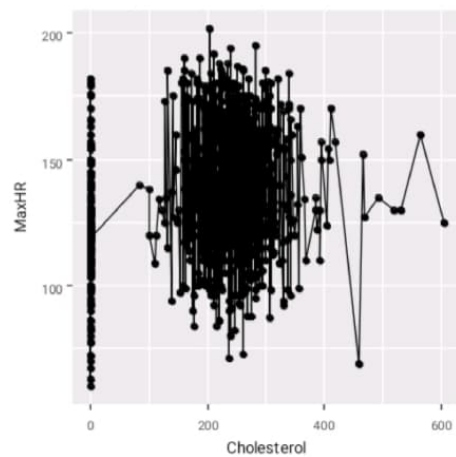
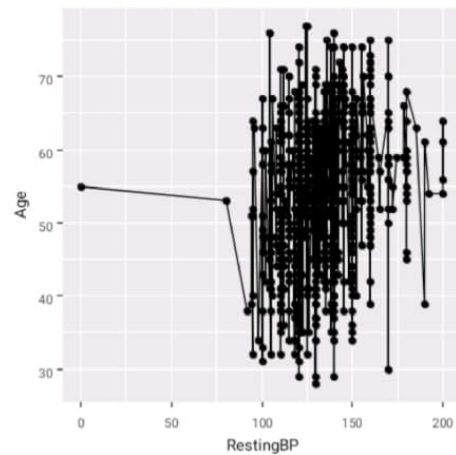


- Scatter plotting

```
ggplot(heart, aes(x =Cholesterol, y =RestingBP)) +geom_point()
```



- Line Graph



9. summary(heart)

```
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Source
Console Terminal Jobs
R 4.1.1 ~
R version 4.1.1 (2021-08-10) -- "Kick Things"
Copyright (C) 2021 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

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You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

[workspace loaded from ~/Rdata]
> library(dplyr)

Attaching package: 'dplyr'

The following objects are masked from 'package:stats':
  filter, lag

The following objects are masked from 'package:base':
  intersect, setdiff, setequal, union

Warning message:
package 'dplyr' was built under R version 4.1.2
> library(ggplot2)
```

```
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Source
Console Terminal Jobs
R 4.1.1 ~
package 'dplyr' was built under R version 4.1.2
> library(ggplot2)
Warning message:
package 'ggplot2' was built under R version 4.1.2
> heart <- read.csv("C:/Users/OK/Downloads/heart.csv")
> view(heart)
> ggplot(heart, aes(x=restingpr, y=cholesterol)) + geom_boxplot()
Warning message:
Continuous x aesthetic -- did you forget aes(group=...)?
> head(heart)
  Age Sex Chestvntype restingpr cholesterol restingpr restingpr maxhr exerciseargins oldpeak ST_Slope
1  40 M      ATA      140      289          0      normal      172          N          0.0      sp
2  49 F      NAP      160      180          0      normal      156          N          1.0      flat
3  37 M      ATA      130      283          0      ST      98          N          0.0      up
4  48 F      ASV      138      214          0      normal      108          Y          1.3      flat
5  54 M      NAP      150      195          0      normal      122          N          0.0      up
6  29 M      NAP      120      339          0      normal      170          N          0.0      up

heartdisease
1      0
2      1
3      0
4      1
5      0
6      0
> max(heart$restingpr)
[1] 200
> min
[1] 0
> max(heart$cholesterol)
[1] 603
> mean(heart$oldpeak)
[1] 0.8871638
> median(heart$cholesterol)
[1] 228
> quantile(heart$cholesterol)
```

Ans4 Descriptive and Inferential statistics
of above dataset :-

① Descriptive:

- Maximum Resting BP of the people having heart disease is 200

- minimum heart disease is 0.

- Mean of oldpeak = 0.8873638

- Median of cholesterol = 223

- quantile of Resting BP is :

0%	25%	50%	75%	100%
0	120	130	140	200

- Standard Deviation for cholesterol
= 109.3841

- Variance of Resting BP =
342.7739

② Inferential \Rightarrow

- chi-squared test

heat <- chisq.test (mydata)

#Output p-value = 0.34273 > 0.04

Thus mydata is highly correlated and we accept the Null hypothesis.

• Anova Test

`mydata <- cte (mydata $ average ~
mydata AST)`

`mydata = 4`

output `pr(>p)` is 0.0016 as this value is less than 0.04 then we reject Null hypothesis and ~~reject~~ accept the alternative hypothesis.

• T-Test \Rightarrow

This is given as the T-score for the dataset `T-test (mydata, mu = 100)`

here p-value is 0.34273 > 0.04
so we accept the Null Hypothesis.

```
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Source
Console Terminal Jobs
R 4.1.1 ~ /
package 'ggplot2' was built under R version 4.1.2
> library(ggplot2)
warning message:
package 'ggplot2' was built under R version 4.1.2
> heart <- read.csv("C:/Users/ok/Downloads/heart.csv")
> view(heart)
> ggplot(heart, aes(x=RestingBP, y=cholesterol)) + geom_boxplot()
warning message:
Continuous x aesthetic -- did you forget aes(group=...)?
> head(heart)
  Age Sex ChestPainType RestingBP cholesterol FastingBS RestingECG MaxHR ExerciseAngina oldpeak ST_Slope
1  40  M       ATA       140       289         0      Normal    172         N      0.0      Up
2  49  F       NAP       160       180         0      Normal    156         N      1.0     Flat
3  37  M       ATA       130       283         0       ST      98         N      0.0      Up
4  48  F       ASY       138       214         0      Normal    108         Y      1.5     Flat
5  54  M       NAP       150       195         0      Normal    122         N      0.0      Up
6  39  M       NAP       120       339         0      Normal    170         N      0.0      Up
HeartDisease
1      0
2      1
3      0
4      1
5      0
6      0
> max(heart$RestingBP)
[1] 200
> min
[1] 0
> max(heart$cholesterol)
[1] 603
> mean(heart$oldpeak)
[1] 0.8873638
> median(heart$cholesterol)
[1] 223
> quantile(heart$cholesterol)
```

```
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Source
Console Terminal Jobs
R 4.1.1 ~ /
0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00
> quantile(heart$RestingBP)
 0.00 25% 50% 75% 100%
 0 120 130 140 200
> sd(heart$cholesterol)
[1] 109.3641
> var(heart$RestingBP)
[1] 342.7739
> ggplot(heart, aes(y=cholesterol, x=age)) + geom_bar(stat = "identity")
> ggplot(heart, aes(x=RestingBP, y=cholesterol)) + geom_boxplot()
warning message:
Continuous x aesthetic -- did you forget aes(group=...)?
> ggplot(heart, aes(x = cholesterol, y = RestingBP)) + geom_point()
> ggplot(heart, aes(y =MaxHR, x =Cholesterol)) +geom_line() + geom_point()
> summary(heart)
      Age      Sex  ChestPainType  RestingBP  Cholesterol  FastingBS
Min.   :28.00  Length:918      Length:918      Min.   : 0.0  Min.   : 0.0  Min.   :0.0000
1st Qu.:47.00  Class :character  Class :character  1st Qu.:120.0  1st Qu.:173.2  1st Qu.:0.0000
Median :54.00  Mode  :character  Mode  :character  Median :130.0  Median :223.0  Median :0.0000
Mean   :53.51                                     Mean :132.4  Mean :198.8  Mean :0.2331
3rd Qu.:60.00                                     3rd Qu.:140.0  3rd Qu.:267.0  3rd Qu.:0.0000
Max.   :77.00                                     Max.   :200.0  Max.   :603.0  Max.   :1.0000
RestingECG  Oldpeak  ST_Slope
Length:918      Min.   :-2.6000  Length:918
Class :character  1st Qu.: 0.0000  Class :character
Mode  :character  Median : 0.6000  Mode  :character
Mean   : 0.8874
3rd Qu.: 1.5000
Max.   : 6.2000
HeartDisease
Min.   :0.0000
1st Qu.:0.0000
Median :1.0000
Mean   :0.5334
3rd Qu.:1.0000
```

