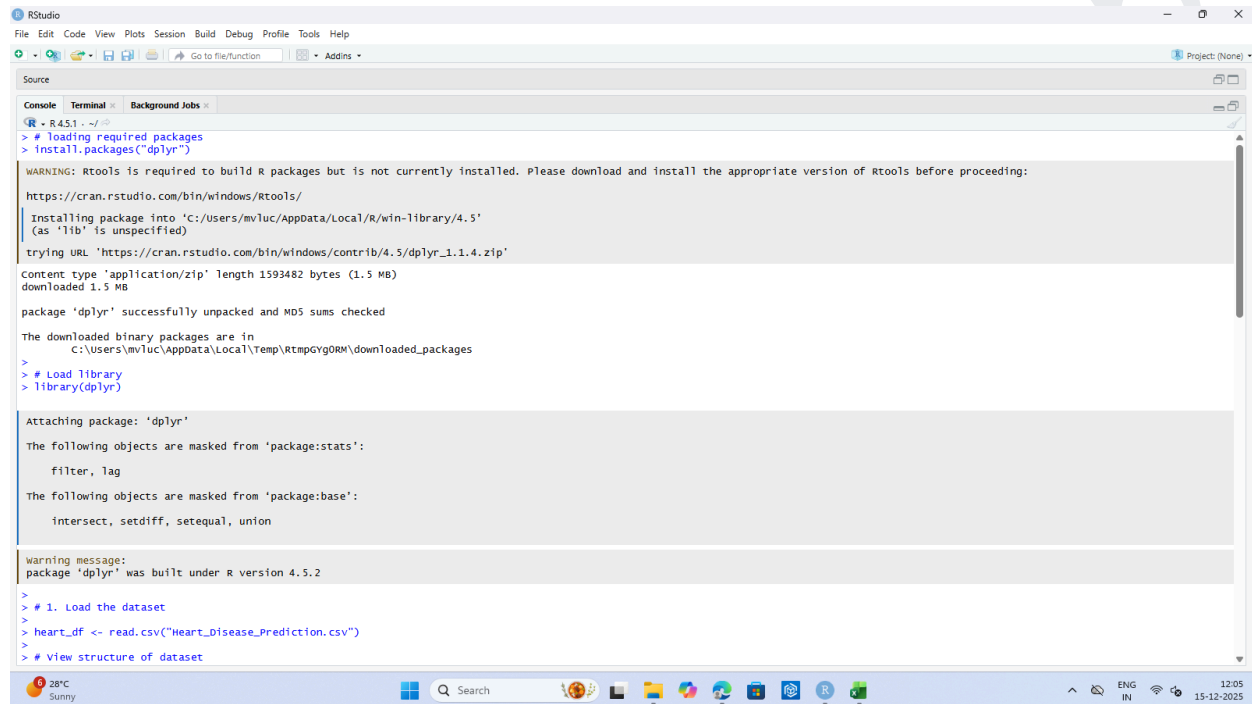


## Practical No 2 Module II

**Aim :** Generating descriptive statistics using summary() or describe() (R)

**Output :**



```
R - R 4.5.1 - ~/
> # loading required packages
> install.packages("dplyr")

WARNING: Rtools is required to build R packages but is not currently installed. Please download and install the appropriate version of Rtools before proceeding:
https://cran.rstudio.com/bin/windows/rtools/
Installing package into 'C:/Users/mvluc/AppData/Local/R/win-library/4.5'
(as 'lib' is unspecified)
trying URL 'https://cran.rstudio.com/bin/windows/contrib/4.5/dplyr_1.1.4.zip'
Content type 'application/zip' length 1593482 bytes (1.5 MB)
downloaded 1.5 MB
package 'dplyr' successfully unpacked and MD5 sums checked
The downloaded binary packages are in
c:\users\mvluc\AppData\Local\Temp\RtmpGyG0RM\downloaded_packages
> # Load library
> 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 4.5.2

>
> # 1. Load the dataset
> heart_df <- read.csv("Heart_Disease_Prediction.csv")
>
> # View structure of dataset
```

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## SUBJECT : R Programming

```
RStudio
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Source
Console Terminal Background Jobs

R - R 4.5.1 - ~/...
library(dplyr, security, selegar, union)

warning message:
package 'dplyr' was built under R version 4.5.2

>
> # 1. Load the dataset
>
> heart_df <- read.csv("Heart_Disease_Prediction.csv")
>
> # View structure of dataset
> str(heart_df)
'data.frame': 270 obs. of 14 variables:
 $ Age      : int  70 67 57 64 74 65 56 59 60 63 ...
 $ Sex      : int  1 0 1 1 0 1 1 1 1 0 ...
 $ chest.pain.type : int  4 3 2 4 2 4 3 4 4 4 ...
 $ BP       : int  130 115 124 128 120 120 130 110 140 150 ...
 $ Cholesterol : int  322 564 261 263 269 177 236 239 293 407 ...
 $ FBS.over.120 : int  0 0 0 0 0 1 0 0 0 ...
 $ EKG.results : int  2 2 0 0 2 0 2 2 2 2 ...
 $ Max.HR    : int  109 160 141 105 121 140 142 142 170 154 ...
 $ Exercise.angina : int  0 0 0 1 1 0 1 1 0 0 ...
 $ ST.depression : num  2.4 1.6 0.3 0.2 0.2 0.4 0.6 1.2 1.2 4 ...
 $ Slope.of.ST : int  2 2 1 2 1 2 2 2 2 ...
 $ Number.of.vessels.fluro: int  3 0 0 1 1 0 1 1 2 3 ...
 $ Thallium   : int  3 7 7 7 3 7 6 7 7 7 ...
 $ Heart.Disease : chr  "Presence" "Absence" "Presence" "Absence" ...

>
> # 2. Frequency Table using table() [Base R]
>
> # Frequency of Gender
> table(heart_df$Sex)
 0  1
87 183
>
> # Frequency of Chest Pain type
> table(heart_df$chest.pain.type)
 1  2  3  4
20 42 79 129
>
> # Frequency of FBS over 120
```

```
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins Project: (None)

Source
Console Terminal Background Jobs

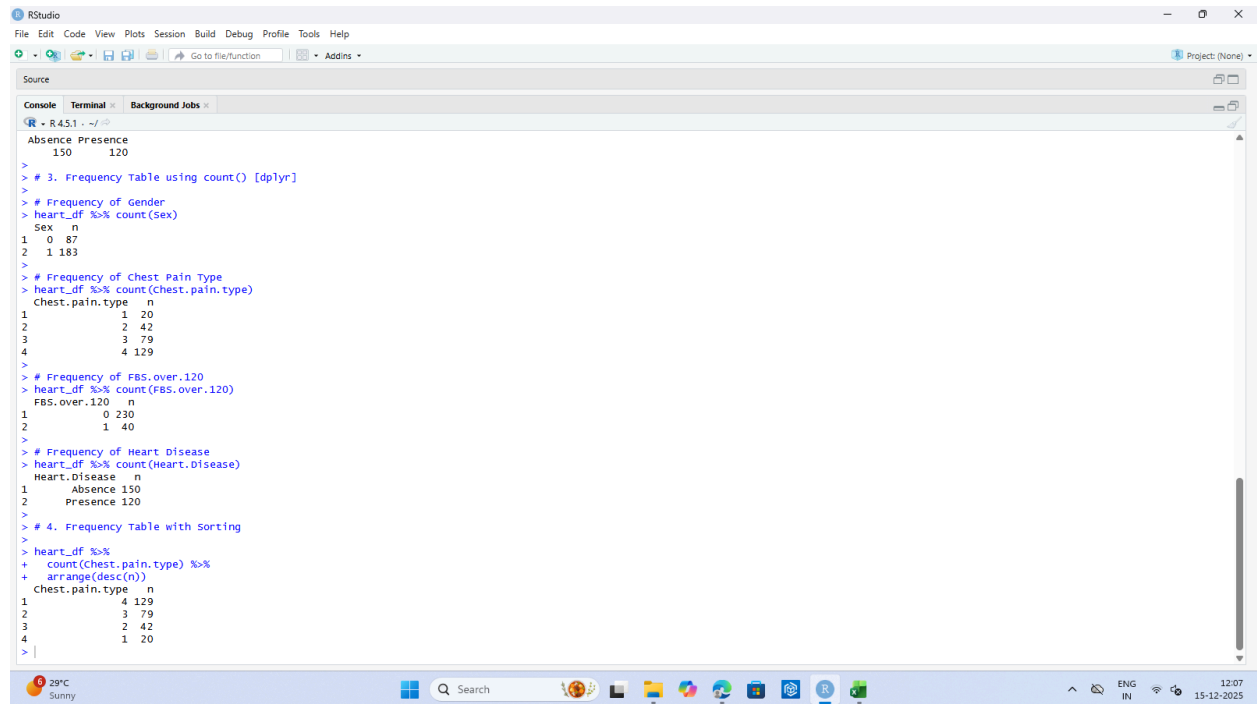
R - R 4.5.1 - ~/...
$ Thallium      : int  3 7 7 7 3 7 6 7 7 7 ...
$ Heart.Disease : chr  "Presence" "Absence" "Presence" "Absence" ...

>
> # 2. Frequency Table using table() [Base R]
>
> # Frequency of Gender
> table(heart_df$Sex)
 0  1
87 183
>
> # Frequency of Chest Pain Type
> table(heart_df$chest.pain.type)
 1  2  3  4
20 42 79 129
>
> # Frequency of FBS over 120
> table(heart_df$FBS.over.120)
 0  1
230 40
>
> # Frequency of Heart Disease (Target Variable)
> table(heart_df$Heart.Disease)
Absence Presence
150      120
>
> # 3. Frequency Table using count() [dplyr]
>
> # Frequency of Gender
> heart_df %>% count(Sex)
  Sex  n
1  0 87
2  1 183
>
> # Frequency of Chest Pain Type
> heart_df %>% count(chest.pain.type)
 chest.pain.type  n
1              1 20
2              2 42
3              3 79
4              4 129
```

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ROLL NO : S085

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## SUBJECT : R Programming



```
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins Project: (None)

Source
Console Terminal Background Jobs
R - R 4.5.1 - ~/
Absence Presence
150 120
>
> # 3. Frequency Table using count() [dplyr]
>
> # Frequency of Gender
> heart_df %>% count(sex)
  sex    n
1  0    87
2  1   183
>
> # Frequency of Chest Pain Type
> heart_df %>% count(chest.pain.type)
 chest.pain.type    n
1              1    20
2              2    42
3              3    79
4              4   129
>
> # Frequency of FBS.over.120
> heart_df %>% count(FBS.over.120)
 FBS.over.120    n
1             0   230
2             1    40
>
> # Frequency of Heart Disease
> heart_df %>% count(Heart.Disease)
 Heart.Disease    n
1      Absence   150
2      Presence   120
>
> # 4. Frequency Table with Sorting
>
> heart_df %>%
+   count(chest.pain.type) %>%
+   arrange(desc(n))
 chest.pain.type    n
1              4   129
2              3    79
3              2    42
4              1    20
> |
```

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