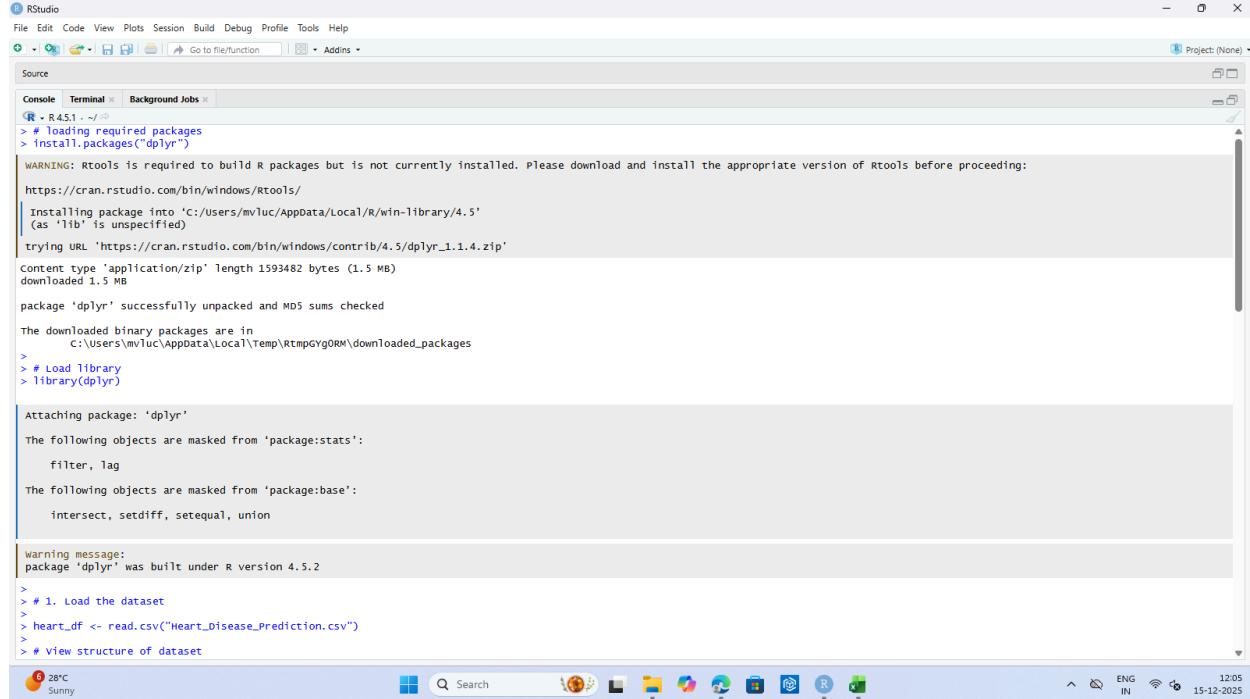


Practical No 2 Module II

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

Output :



The screenshot shows the RStudio interface with the following R code in the Console tab:

```
R - R 4.5.1 - ~/R
> # 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\RtmpGYgORM\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
```

The RStudio interface includes a menu bar (File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, Help), a toolbar with various icons, and a status bar at the bottom showing system information like weather (28°C, sunny), date (15-12-2025), and time (12:05).

SHETH L.U.J. AND SIR M.V. COLLEGE OF ARTS SCIENCE AND COMMERCE

SUBJECT : R Programming

RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Project: (None)
Source
Console Terminal Background Jobs
R > R 4.5.1 - /
interactivity, security, seteq, quasiquo, unquote
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 37 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 130 115 124 128 120 130 110 140 150 ...
 \$ Cholesterol : int 322 564 261 263 269 177 256 239 293 407 ...
 \$ FBS.over.120 : int 0 0 0 0 0 1 0 0 0 0 ...
 \$ EKG.results : int 2 2 0 0 2 0 2 2 2 2 ...
 \$ Max.heart.rate : int 109 160 141 105 121 140 142 142 170 154 ...
 \$ Resting.angina : int 0 0 0 0 0 0 0 0 0 0 ...
 \$ ST_depression : num 2.4 1.6 0.3 0.2 0.0 0.4 0.6 1.2 1.2 4 ...
 \$ Slope.of.ST : int 2 2 1 2 1 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
>

RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function 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 3 129
4 4 129
>

SHETH L.U.J. AND SIR M.V. COLLEGE OF ARTS SCIENCE AND COMMERCE

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 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  
> |
```

29°C Sunny 12:07 15-12-2025 ENG IN