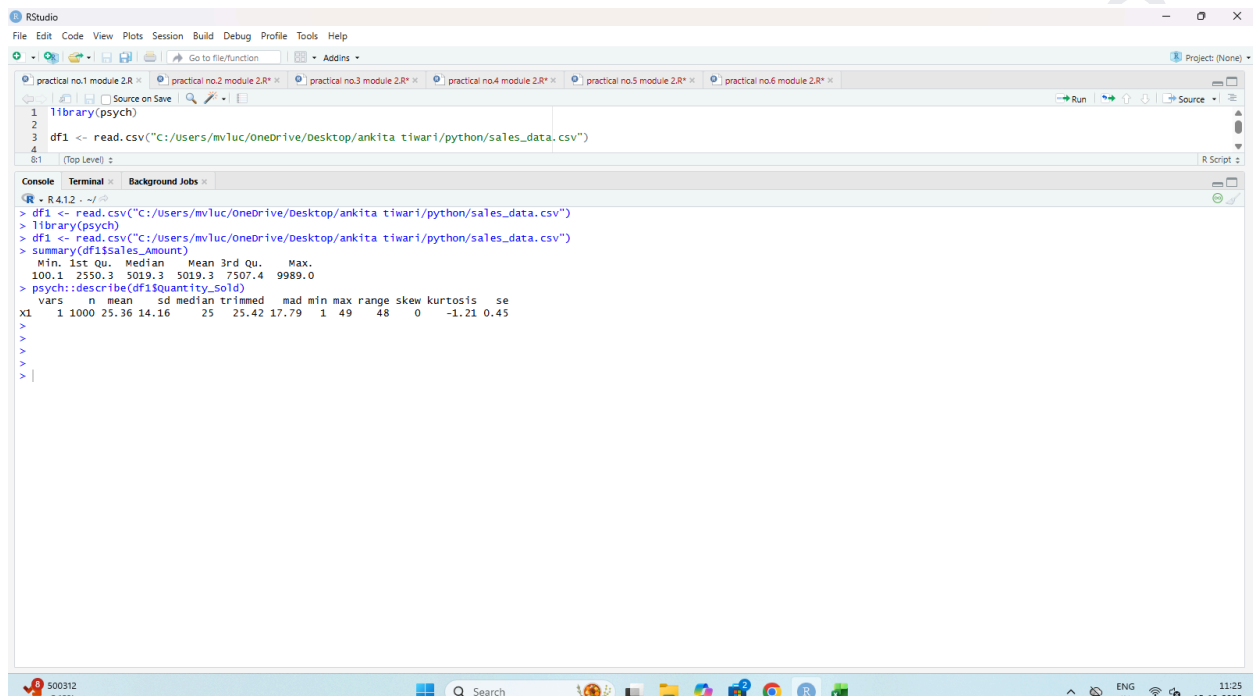# MVLU COLLEGE

AIM: Practical 1 to 6Generating descriptive statistics using summary() or describe() (R).Generating frequency tables using table() or count() (R). Creating cross-tabulations and two-way tables using table() (R). Performing one-sample t-tests using t.test() (R). Performing independent two-sample t-tests using t.test() with grouping (R). Performing paired t-tests using t.test(paired=TRUE) (R).

PRACTICAL NO. 1 OUTPUT:

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SYCS
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DATA ANALYSIS PRACTICAL NO.1-6 MODULE 2

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PRACTICAL NO. 2 OUTPUT:


```
> # Load the dplyr library
> library(dplyr)
>
> # Read the CSV file
> df2 <- read.csv("C:/Users/mvluc/OneDrive/Desktop/ankita tiwari/python/sales_data.csv")
>
> # Display the count of each unique value in the 'Region' column
> table(df2$Region)

 East North South  West
 263   267   226   244

> # Count the number of occurrences for each 'Product_Category'
> df2 %>%
+   count(Product_Category)
  Product_Category   n
1         Clothing 268
2      Electronics 246
3             Food 226
4        Furniture 260
>
>
> # Load the dplyr library
> library(dplyr)
>
> # Read the CSV file
> df2 <- read.csv("C:/Users/mvluc/OneDrive/Desktop/ankita tiwari/python/sales_data.csv")
>
> # Display the count of each unique value in the 'Region' column
> table(df2$Region)

 East North South  West
 263   267   226   244

> # Count the number of occurrences for each 'Product_Category'
> df2 %>%
+   count(Product_Category)
  Product_Category   n
1         Clothing 268
2      Electronics 246
3             Food 226
4        Furniture 260
> # Load the dplyr library
```

PRACTICAL NO. 3 OUTPUT:


```
1  df3 <- read.csv("C:/Users/mvluc/OneDrive/Desktop/ankita tiwari/python/Student Mental health.csv", stringsAsFactors = FALSE)
2
```

```
> df3 <- read.csv("C:/Users/mvluc/OneDrive/Desktop/ankita tiwari/python/Student Mental health.csv", stringsAsFactors = FALSE)
>
> colnames(df3)
 [1] "Timestamp"                         "Choose.your.gender"                "Age"
 [4] "what.is.your.course."              "Your.current.year.of.Study"        "what.is.your.CGPA."
 [7] "Marital.status"                    "Do.you.have.Depression."           "Do.you.have.Anxiety."
[10] "Do.you.have.Panic.attack."         "Did.you.seek.any.specialist.for.a.treatment."
>
> table(df3$`Choose your gender`, df3$`Do you have Depression?`)
< table of extent 0 x 0 >
>
```
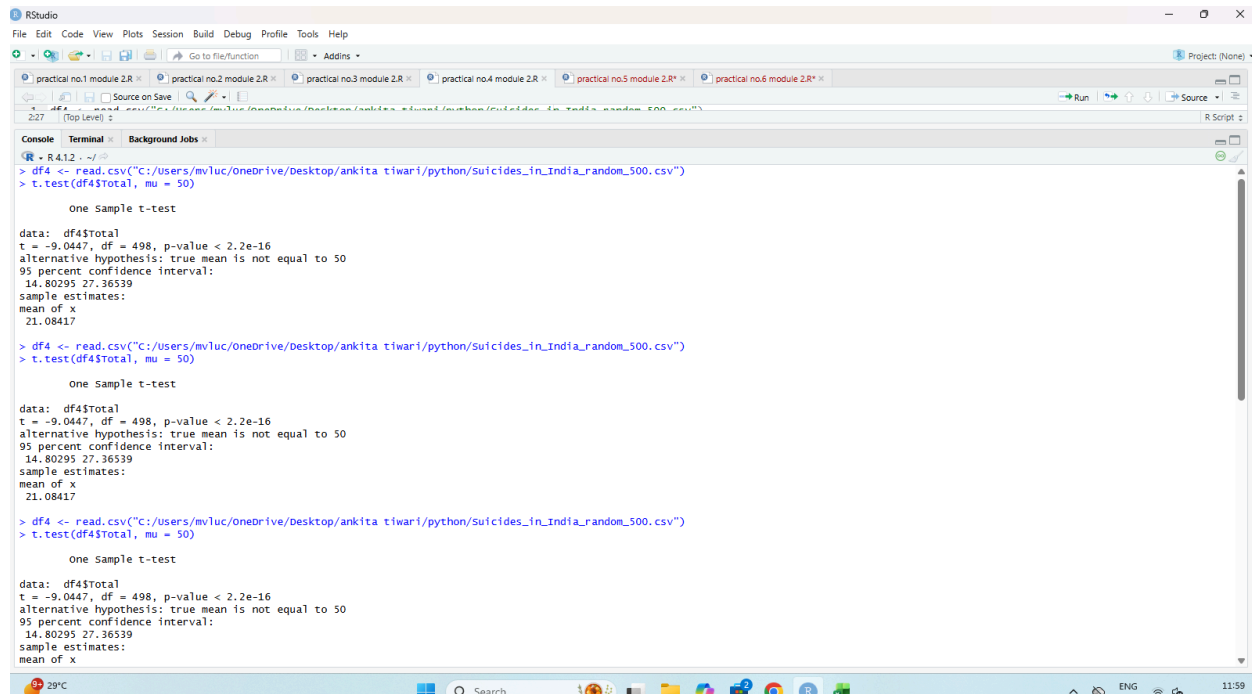
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PRACTICAL NO. 4 OUTPUT:


```
> df4 <- read.csv("C:/Users/mvlu/OneDrive/Desktop/ankita tiwari/python/Suicides_in_India_random_500.csv")
> t.test(df4$Total, mu = 50)

        One Sample t-test

data:  df4$Total
t = -9.0447, df = 498, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 50
95 percent confidence interval:
 14.80295 27.36539
sample estimates:
mean of x
 21.08417

> df4 <- read.csv("C:/Users/mvlu/OneDrive/Desktop/ankita tiwari/python/Suicides_in_India_random_500.csv")
> t.test(df4$Total, mu = 50)

        One Sample t-test

data:  df4$Total
t = -9.0447, df = 498, p-value < 2.2e-16
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 14.80295 27.36539
sample estimates:
mean of x
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> df4 <- read.csv("C:/Users/mvluc/OneDrive/Desktop/ankita tiwari/python/Suicides_in_India_random_500.csv")
> t.test(df4$Total, mu = 50)

        One Sample t-test

data:  df4$Total
t = -9.0447, df = 498, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 50
95 percent confidence interval:
 14.80295 27.36539
sample estimates:
mean of x
```
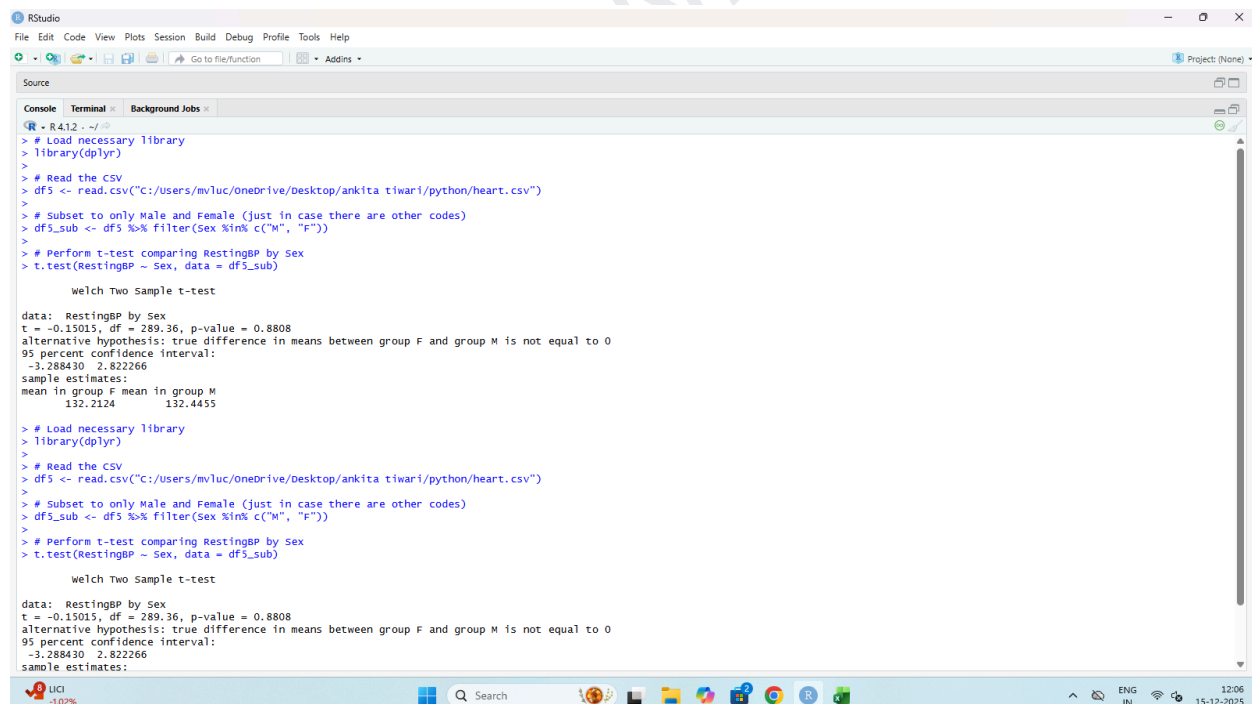
PRACTICAL NO. 5 OUTPUT:


```
> # Load necessary library
> library(dplyr)
>
> # Read the CSV
> df5 <- read.csv("C:/Users/mvluc/OneDrive/Desktop/ankita tiwari/python/heart.csv")
>
> # Subset to only Male and Female (just in case there are other codes)
> df5_sub <- df5 %>% filter(Sex %in% c("M", "F"))
>
> # Perform t-test comparing RestingBP by Sex
> t.test(RestingBP ~ Sex, data = df5_sub)

        Welch Two Sample t-test

data:  RestingBP by Sex
t = -0.15015, df = 289.36, p-value = 0.8808
alternative hypothesis: true difference in means between group F and group M is not equal to 0
95 percent confidence interval:
 -3.288430  2.822266
sample estimates:
mean in group F mean in group M
       132.2124        132.4455

> # Load necessary library
> library(dplyr)
>
> # Read the CSV
> df5 <- read.csv("C:/Users/mvluc/OneDrive/Desktop/ankita tiwari/python/heart.csv")
>
> # Subset to only Male and Female (just in case there are other codes)
> df5_sub <- df5 %>% filter(Sex %in% c("M", "F"))
>
> # Perform t-test comparing RestingBP by Sex
> t.test(RestingBP ~ Sex, data = df5_sub)

        Welch Two Sample t-test

data:  RestingBP by Sex
t = -0.15015, df = 289.36, p-value = 0.8808
alternative hypothesis: true difference in means between group F and group M is not equal to 0
95 percent confidence interval:
 -3.288430  2.822266
sample estimates:
```
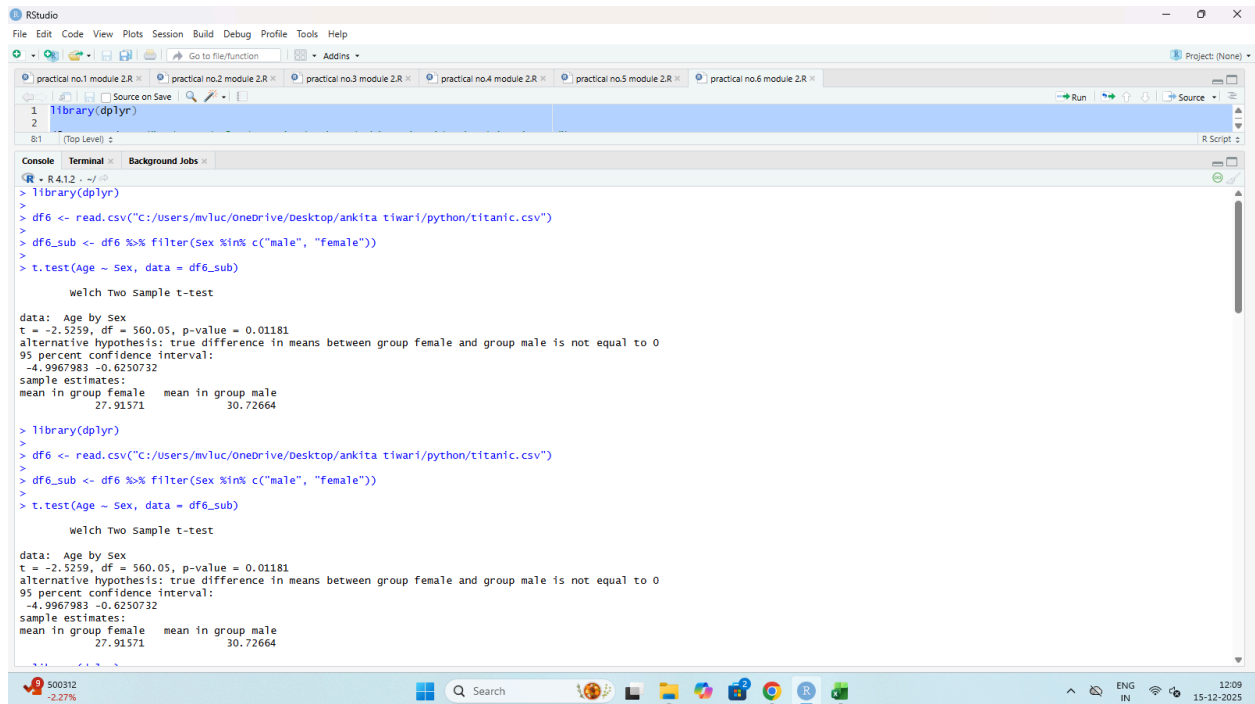
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PRACTICAL NO. 6 OUTPUT:

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DATA ANALYSIS PRACTICAL NO.1-6 MODULE 2