

**SHETH L.U.J AND SIR M.V. COLLEGE**  
**SUBJECT NAME: DATA ANALYSIS WITH SAS/SPSS/R**

# Module 1 Practical 15

**Aim:** Generating basic summaries using `str()` or `summary()` (R).

## OUTPUT:

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## SUBJECT NAME: DATA ANALYSIS WITH SAS/SPSS/R

RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Console Terminal Background Jobs

```
R - R 4.5.2 : C:/Users/mvlic/Downloads/
$ uses_kaggle : num [1:3000] 24 82 43 40 47 35 35 41 26 42 ...
$ participates_in_discussion_forums : num [1:3000] 0 0 0 1 0 0 1 1 ...
$ debugging_sessions_per_week : num [1:3000] 1 0 0 0 1 0 1 0 1 ...
$ self_reported_confidence_python : num [1:3000] 4.5 6 3.3 3.5 7 5 6 ...
$ final_exam_score : num [1:3000] 10 7 3 10 7 3 2 1 6 3 ...
$ passed_exam : num [1:3000] 53.8 31.9 59.4 58.8 24.8 43.8 40.8 24.7 20.7 45.3 ...
- attr(*, "spec")-
.. cols-
.. student_id = col_double(),
.. age = col_double(),
.. country = col_character(),
.. prior_programming_experience = col_character(),
.. weeks_in_course = col_double(),
.. hours_spent_learning_per_week = col_double(),
.. practice_problems_solved = col_double(),
.. projects_completed = col_double(),
.. tutorial_videos_watched = col_double(),
.. uses_kaggle = col_double(),
.. participates_in_discussion_forums = col_double(),
.. debugging_sessions_per_week = col_double(),
.. self_reported_confidence_python = col_double(),
.. final_exam_score = col_double(),
.. passed_exam = col_double()
.. )
- attr(*, "problems")=externalptr
> #
> -----
> print("--- OUTPUT OF summary() [Before Factor Conversion] ---")
[1] "--- OUTPUT OF summary() [Before Factor Conversion] ---"
> summary(df)
summary(df)
student_id    age      country prior_programming_experience weeks_in_course hours_spent_learning_per_week practice_problems_solved
Min.   : 1.0   Min.   :16.00 Length:3000   Length:3000   Min.   : 1.000   Min.   : 0.000   Min.   :35.00
1st Qu.: 750.8 1st Qu.:26.00 Class :character  Class :character  1st Qu.: 5.000   1st Qu.: 5.000   1st Qu.:55.00
Median :1500.5  Median :36.00 Mode  :character  Mode  :character  Median : 8.000   Median : 7.000   Median :60.00
Mean   :1500.5  Mean   :36.00          Mean   :          Mean   : 8.211   Mean   : 7.035   Mean   :59.98
3rd Qu.:2250.2 3rd Qu.:45.00          3rd Qu.:          3rd Qu.:12.000   3rd Qu.: 9.000   3rd Qu.:65.00
Max.   :3000.0  Max.   :54.00          Max.   :          Max.   :15.000   Max.   :17.100   Max.   :87.00
projects_completed tutorial_videos_watched uses_kaggle participates_in_discussion_forums debugging_sessions_per_week self_reported_confidence_python
Min.   :0.000   Min.   :19.0   Min.   :0.0000   Min.   :0.0000   Min.   : 1.000   Min.   : 1.000
1st Qu.:1.000   1st Qu.:35.0   1st Qu.:0.0000   1st Qu.:0.0000   1st Qu.: 3.000   1st Qu.: 3.000
Median :3.000   Median :40.0   Median :0.0000   Median :0.0000   Median : 5.000   Median : 5.000
Mean   :3.000   Mean   :39.9   Mean   :0.4000   Mean   :0.4000   Mean   : 5.186   Mean   : 5.186
3rd Qu.:5.000   3rd Qu.:44.0   3rd Qu.:1.0000   3rd Qu.:1.0000   3rd Qu.:12.000   3rd Qu.: 9.000
Max.   :9.000   Max.   :63.0   Max.   :1.0000   Max.   :1.0000   Max.   :17.000   Max.   :10.000
passed_exam
Min.   : 0.00   Min.   :0.0000
1st Qu.: 90.00  1st Qu.:0.0000
Median :43.32  Median :0.1773
Mean   :43.32  Mean   :0.1773
3rd Qu.:55.60  3rd Qu.:0.0000
Max.   :100.00  Max.   :1.0000
-> # -----
-> df$prior_programming_experience <- as.factor(df$prior_programming_experience)
-> df$country <- as.factor(df$country)
-> print("--- OUTPUT OF summary() [After Factor Conversion] ---")
[1] "--- OUTPUT OF summary() [After Factor Conversion] ---"
> summary(df)
summary(df)
student_id    age      country prior_programming_experience weeks_in_course hours_spent_learning_per_week practice_problems_solved
Min.   : 1.0   Min.   :16.00 Brazil :339 Advanced : 270   Min.   : 1.000   Min.   : 0.000   Min.   :35.00
1st Qu.: 750.8 1st Qu.:26.00 Germany:319 Beginner :1034   1st Qu.: 5.000   1st Qu.: 5.000   1st Qu.:55.00
Median :1500.5  Median :36.00 India  :304 Intermediate:634   Median : 8.000   Median : 7.000   Median :60.00
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3rd Qu.:2250.2 3rd Qu.:43.00 USA    :398          3rd Qu.:12.000   3rd Qu.: 9.000   3rd Qu.:65.00
Max.   :3000.0  Max.   :54.00 UK    :297          Max.   :15.000   Max.   :17.100   Max.   :87.00
-> (other):1141
projects_completed tutorial_videos_watched uses_kaggle participates_in_discussion_forums debugging_sessions_per_week self_reported_confidence_python
Min.   :0.000   Min.   :19.0   Min.   :0.0000   Min.   :0.0000   Min.   : 1.000   Min.   : 1.000
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Median :2.000   Median :40.0   Median :0.0000   Median :0.0000   Median : 5.000   Median : 6.000
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final_exam_score passed_exam
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-> print("-----")
[1] "-----"
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```

Environment History Console

Data

- df 3000 obs. o...
- Food\_ 200 obs. of...
- proce\_ 200 obs. of...
- pytho\_ 3000 obs. o...
- values

avg\_s... 43.318266666...

curr\_e... 2025-12-08 11...

diffr... -10

max\_h... 17.1

Files Plots Packages Help

2 RestfullPractical.pdf

3 SOAP Practical.pdf

ad (1).docx

AD PRACTICAL I.docx

ad.docx

Advance python 6.docx.pdf

Advance python Practical 5

Advance python Practical 5

Advance python Practical 5

Age-standardized suicide rate

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Max.   :3000.0  Max.   :54.00          Max.   :          Max.   :15.000   Max.   :17.100   Max.   :87.00
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Min.   :0.000   Min.   :19.0   Min.   :0.0000   Min.   :0.0000   Min.   : 1.000   Min.   : 1.000
1st Qu.:1.000   1st Qu.:35.0   1st Qu.:0.0000   1st Qu.:0.0000   1st Qu.: 3.000   1st Qu.: 3.000
Median :3.000   Median :40.0   Median :0.0000   Median :0.0000   Median : 5.000   Median : 6.000
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Min.   :0.000   Min.   :19.0   Min.   :0.0000   Min.   :0.0000   Min.   : 1.000   Min.   : 1.000
1st Qu.:1.000   1st Qu.:35.0   1st Qu.:0.0000   1st Qu.:0.0000   1st Qu.: 3.000   1st Qu.: 3.000
Median :2.000   Median :40.0   Median :0.0000   Median :0.0000   Median : 5.000   Median : 6.000
Mean   :2.000   Mean   :39.9   Mean   :0.4000   Mean   :0.4000   Mean   : 5.186   Mean   : 5.186
3rd Qu.:5.000   3rd Qu.:44.0   3rd Qu.:1.0000   3rd Qu.:1.0000   3rd Qu.:12.000   3rd Qu.: 9.000
Max.   :9.000   Max.   :63.0   Max.   :1.0000   Max.   :1.0000   Max.   :17.000   Max.   :10.000
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-> # -----
-> print("-----")
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avg\_s... 43.318266666...

curr\_e... 2025-12-08 11...

diffr... -10

max\_h... 17.1

Files Plots Packages Help

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Advance python Practical 5

Advance python Practical 5

Advance python Practical 5

Age-standardized suicide rate

android-studio-2025.2.1.8-win

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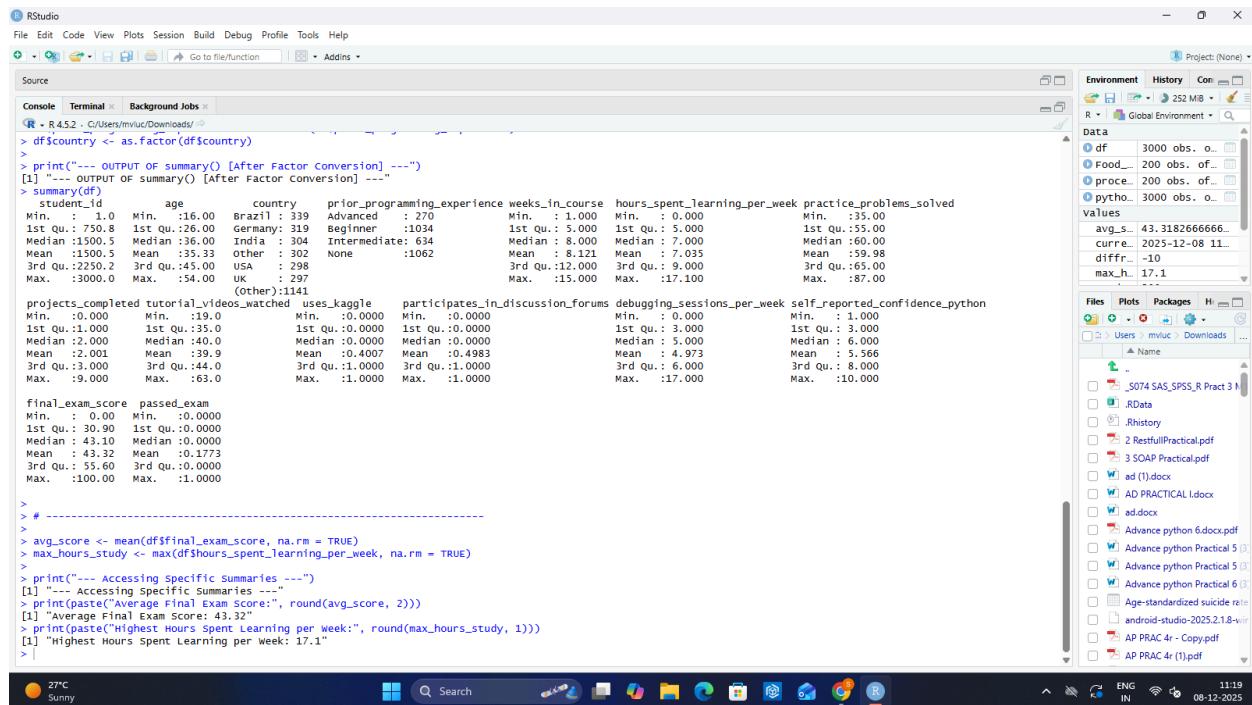
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**SHETH L.U.J AND SIR M.V. COLLEGE**  
**SUBJECT NAME: DATA ANALYSIS WITH SAS/SPSS/R**



The screenshot shows an RStudio interface with the following details:

- Console:** Displays R code and its output. The code includes factor conversion, summary statistics for various variables like student\_id, age, country, and programming experience, and specific summaries for final exam scores.
- Environment:** Shows global variables: df (3000 obs.), Food\_ (200 obs.), proce\_ (200 obs.), and pytho\_ (3000 obs.). It also lists values such as avg\_s... (43.318266666), curr... (2025-12-08 11...), diff... (-10), and max\_h... (17.1).
- Files:** Shows a project folder structure including RData, RHistory, and several PDF and DOCX files related to practical work.
- Plots:** No plots are visible in the screenshot.
- Packages:** No packages are visible in the screenshot.
- Help:** No help documentation is visible in the screenshot.