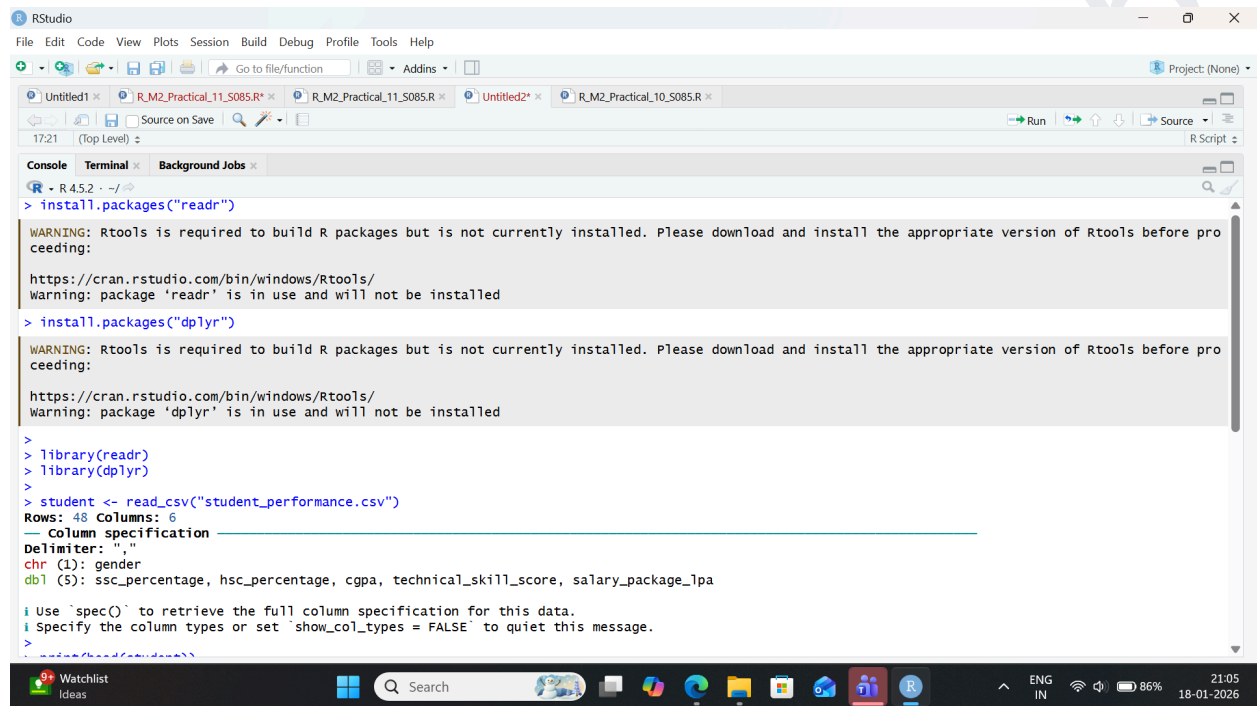


Practical No 12 Module II

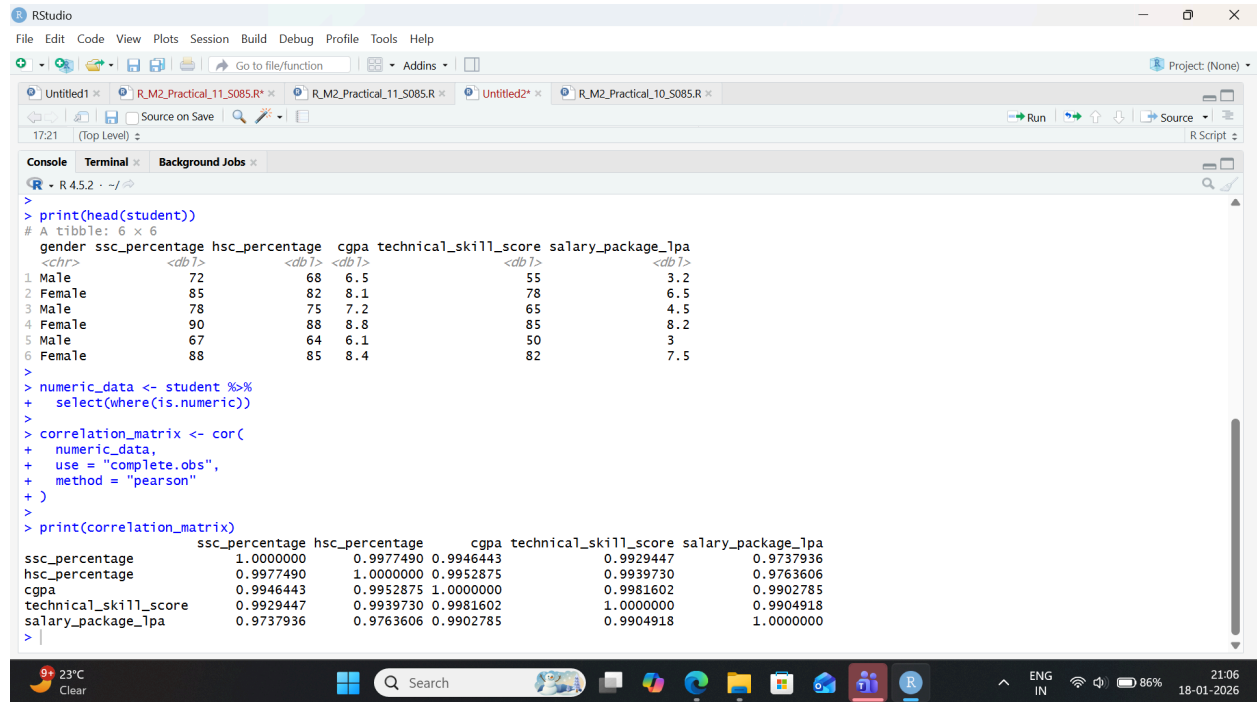
Aim : Generating correlation matrices using `cor()`.

Output :



```
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins Project: (None)
17:21 (Top Level) R Script
Console Terminal Background Jobs
R - R 4.5.2 - /
> install.packages("readr")
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/
Warning: package 'readr' is in use and will not be installed
> 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/
Warning: package 'dplyr' is in use and will not be installed
> library(readr)
> library(dplyr)
>
> student <- read_csv("student_performance.csv")
Rows: 48 Columns: 6
— Column specification —————
Delimiter: ","
chr (1): gender
dbl (5): ssc_percentage, hsc_percentage, cgpa, technical_skill_score, salary_package_lpa
Use `spec()` to retrieve the full column specification for this data.
Specify the column types or set `show_col_types = FALSE` to quiet this message.
>
```

SHETH L.U.J. AND SIR M.V. COLLEGE OF ARTS SCIENCE AND COMMERCE
SUBJECT : R Programming



```
> print(head(student))
# A tibble: 6 x 6
  gender ssc_percentage hsc_percentage cgpa technical_skill_score salary_package_lpa
  <chr>      <dbl>          <dbl>    <dbl>          <dbl>          <dbl>
1 Male      72            68      6.5            55            3.2
2 Female    85            82      8.1            78            6.5
3 Male      78            75      7.2            65            4.5
4 Female    90            88      8.8            85            8.2
5 Male      67            64      6.1            50            3
6 Female    88            85      8.4            82            7.5

> numeric_data <- student %>%
+   select(where(is.numeric))
>
> correlation_matrix <- cor(
+   numeric_data,
+   use = "complete.obs",
+   method = "pearson"
+ )
>
> print(correlation_matrix)
          ssc_percentage hsc_percentage cgpa technical_skill_score salary_package_lpa
ssc_percentage      1.0000000      0.9977490 0.9946443      0.9929447      0.9737936
hsc_percentage      0.9977490      1.0000000 0.9952875      0.9939730      0.9763606
cgpa                 0.9946443      0.9952875 1.0000000      0.9981602      0.9902785
technical_skill_score 0.9929447      0.9939730 0.9981602      1.0000000      0.9904918
salary_package_lpa   0.9737936      0.9763606 0.9902785      0.9904918      1.0000000
```

NAME : SHUBHAM SANJAY KARAPE
ROLL NO : S085