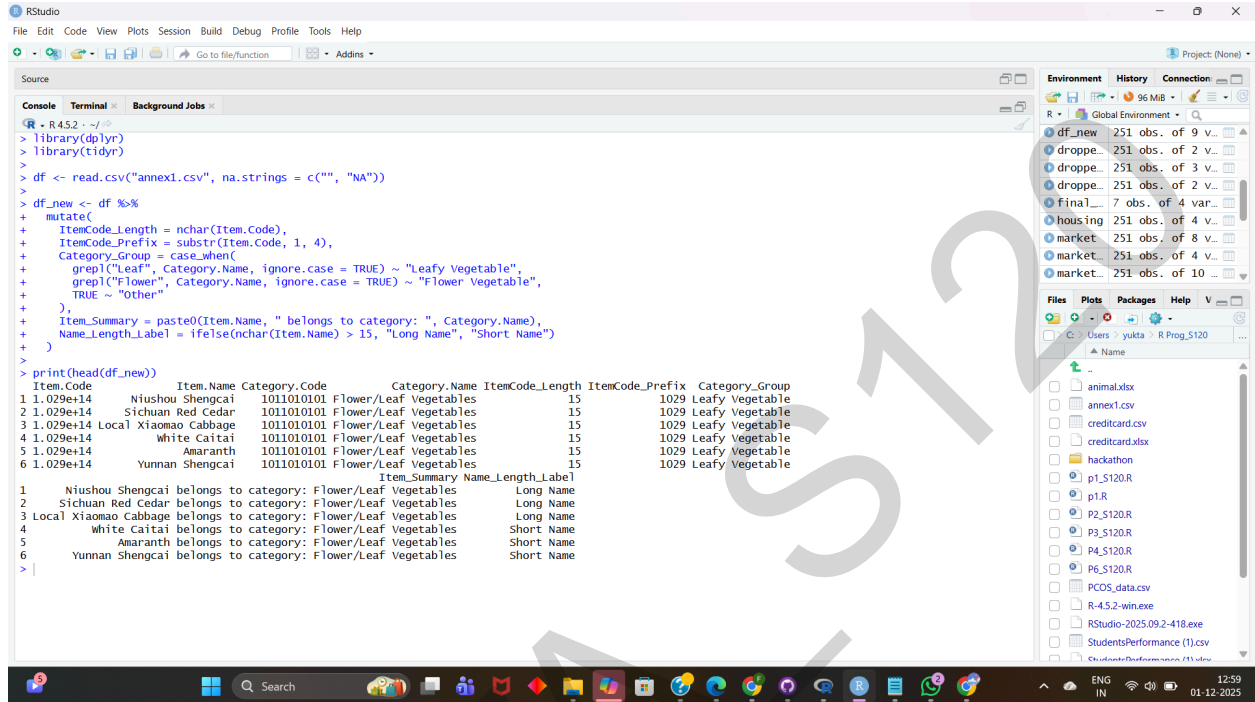


SHETH L.U.J AND SIR M.V COLLEGE

Aim: Creating new variables using transformations and calculations in R. import dataset.



The screenshot shows the RStudio interface. The console window displays the following R code and its output:

```
> library(dplyr)
> library(tidy)
> df <- read.csv("annex1.csv", na.strings = c("", "NA"))
>
> df_new <- df %>%
+   mutate(
+     ItemCode_Length = nchar(Item.Code),
+     ItemCode_Prefix = substr(Item.Code, 1, 4),
+     Category_Group = case_when(
+       grepl("Leaf", Category.Name, ignore.case = TRUE) ~ "Leafy Vegetable",
+       grepl("Flower", Category.Name, ignore.case = TRUE) ~ "Flower Vegetable",
+       TRUE ~ "Other"
+     ),
+     Item_Summary = paste0(Item.Name, " belongs to category: ", Category.Name),
+     Name_Length_Label = ifelse(nchar(Item.Name) > 15, "Long Name", "Short Name")
+   )
> print(head(df_new))
```

The output of the code is a table with 6 columns: Item.Code, Item.Name, Category.Code, Category.Name, ItemCode_Length, ItemCode_Prefix, and Category_Group. The first 6 rows of data are shown:

Item.Code	Item.Name	Category.Code	Category.Name	ItemCode_Length	ItemCode_Prefix	Category_Group
1.029e+14	Niushou Shengcai	1011010101	Flower/Leaf Vegetables	15	1029	Leafy Vegetable
2.029e+14	Sichuan Red Cedar	1011010101	Flower/Leaf Vegetables	15	1029	Leafy Vegetable
3.029e+14	Local Xiaomao Cabbage	1011010101	Flower/Leaf Vegetables	15	1029	Leafy Vegetable
4.029e+14	White Caitai	1011010101	Flower/Leaf Vegetables	15	1029	Leafy Vegetable
5.029e+14	Amaranth	1011010101	Flower/Leaf Vegetables	15	1029	Leafy Vegetable
6.029e+14	Yunnan Shengcai	1011010101	Flower/Leaf Vegetables	15	1029	Leafy Vegetable

The Environment pane on the right shows the objects created in the R session, including df_new, df, and various data files like animal.xlsx, annex1.csv, creditcard.csv, creditcard.xlsx, hackathon, p1_S120.R, p2_S120.R, p3_S120.R, p4_S120.R, p6_S120.R, PCOS_data.csv, R-4.5.2-win.exe, RStudio-2025.09.2-418.exe, and StudentsPerformance (1).csv.

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R PROGRAMMING
PRACTICAL NO: 10