Sheth l.u.j. And sir m.v. college of arts science and commerce
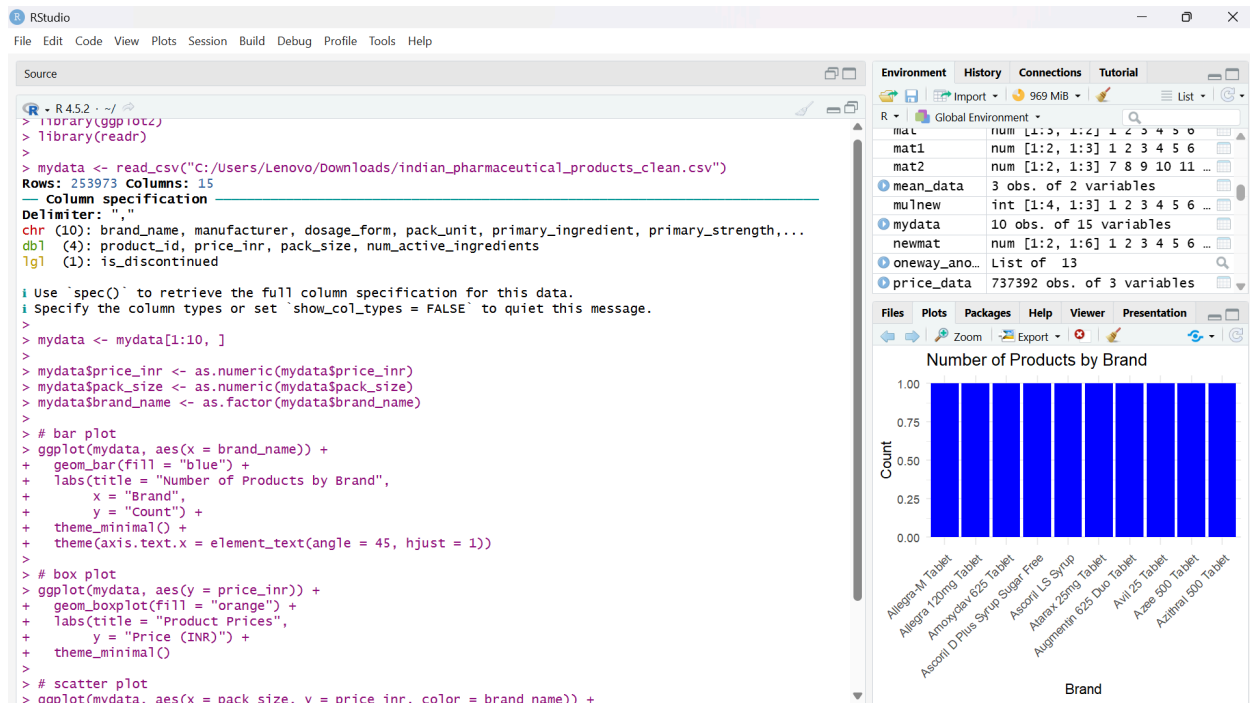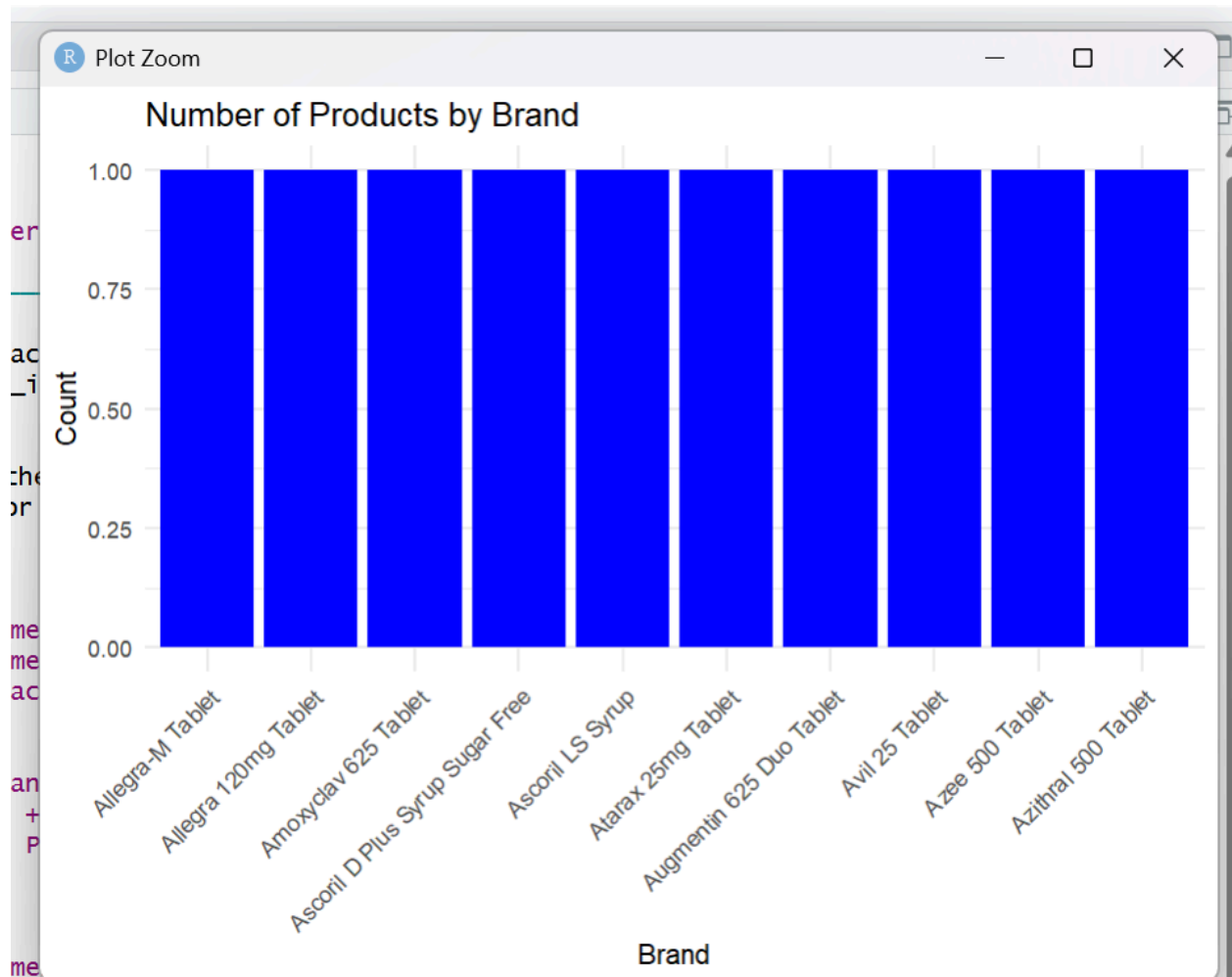## Practical no. mod 2 10th

Aim: Creating graphical reports using ,ggplot2 (R).
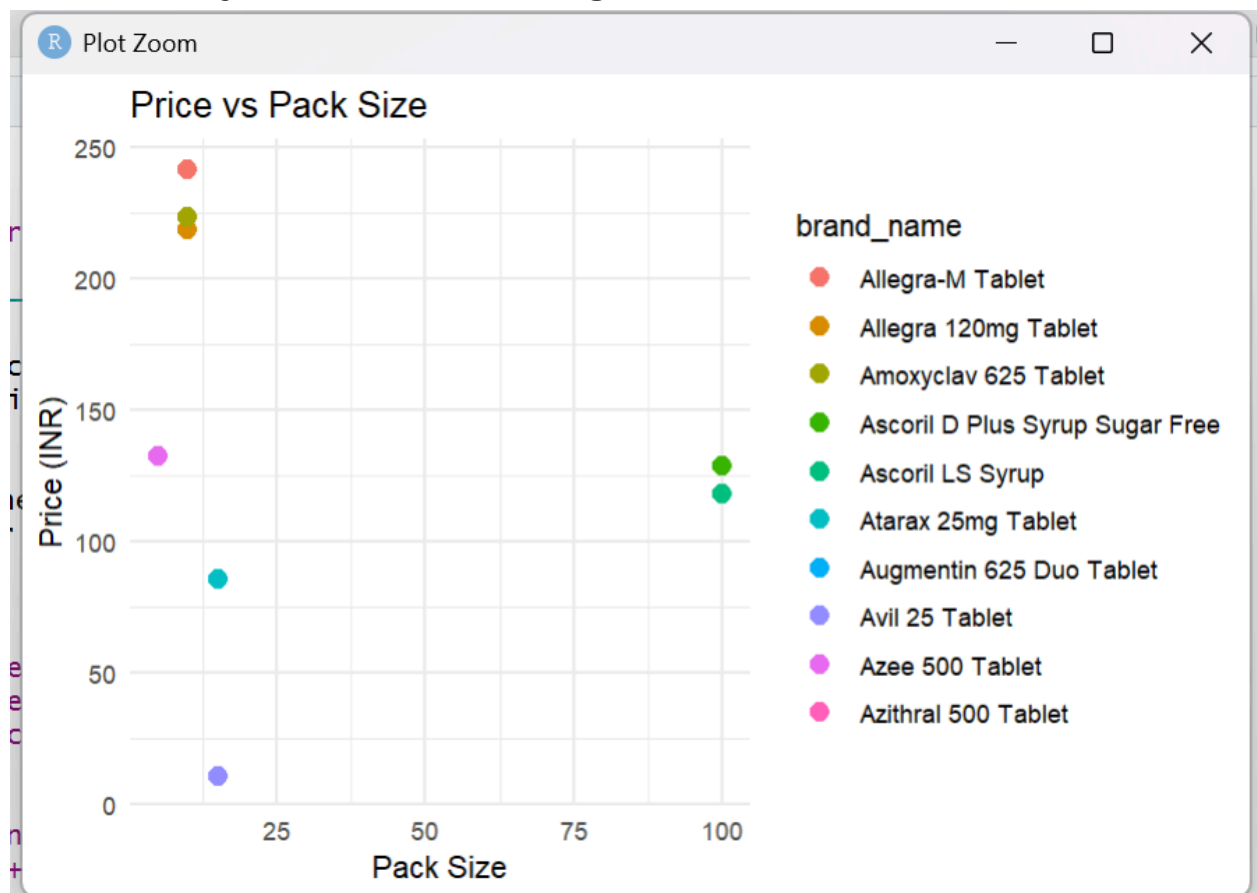
```
R RStudio                                                                    —  ▢  ✕
File  Edit  Code  View  Plots  Session  Build  Debug  Profile  Tools  Help

Source                                                                        ▢ ▢
R ▾ R 4.5.2 · ~/
> library(ggplot2)
> library(readr)
>
> mydata <- read_csv("C:/Users/Lenovo/Downloads/indian_pharmaceutical_products_clean.csv")
Rows: 253973 Columns: 15
── Column specification ─────────────────────────────────────
Delimiter: ","
chr (10): brand_name, manufacturer, dosage_form, pack_unit, primary_ingredient, primary_strength,...
dbl  (4): product_id, price_inr, pack_size, num_active_ingredients
lgl  (1): is_discontinued

i Use `spec()` to retrieve the full column specification for this data.
i Specify the column types or set `show_col_types = FALSE` to quiet this message.
>
> mydata <- mydata[1:10, ]
>
> mydata$price_inr <- as.numeric(mydata$price_inr)
> mydata$pack_size <- as.numeric(mydata$pack_size)
> mydata$brand_name <- as.factor(mydata$brand_name)
>
> # bar plot
> ggplot(mydata, aes(x = brand_name)) +
+   geom_bar(fill = "blue") +
+   labs(title = "Number of Products by Brand",
+        x = "Brand",
+        y = "Count") +
+   theme_minimal() +
+   theme(axis.text.x = element_text(angle = 45, hjust = 1))
>
> # box plot
> ggplot(mydata, aes(y = price_inr)) +
+   geom_boxplot(fill = "orange") +
+   labs(title = "Product Prices",
+        y = "Price (INR)") +
+   theme_minimal()
>
> # scatter plot
> ggplot(mydata, aes(x = pack_size, y = price_inr, color = brand_name)) +
```
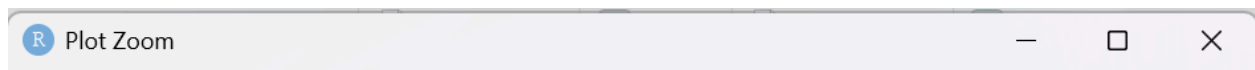
Environment / History / Connections / Tutorial

```
mat    num [1:3, 1:2] 1 2 3 4 5 6
mat1   num [1:2, 1:3] 1 2 3 4 5 6
mat2   num [1:2, 1:3] 7 8 9 10 11 …
mean_data   3 obs. of 2 variables
mulnew      int [1:4, 1:3] 1 2 3 4 5 6 …
mydata      10 obs. of 15 variables
newmat      num [1:2, 1:6] 1 2 3 4 5 6 …
oneway_ano… List of 13
price_data  737392 obs. of 3 variables
```

Files / Plots / Packages / Help / Viewer / Presentation

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Plot Zoom

Number of Products by Brand

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Product Prices

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Pie Chart of Products by Dosage Form

Dosage Form

- syrup
- tablet

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High–Low Chart of Product Prices by Brand

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