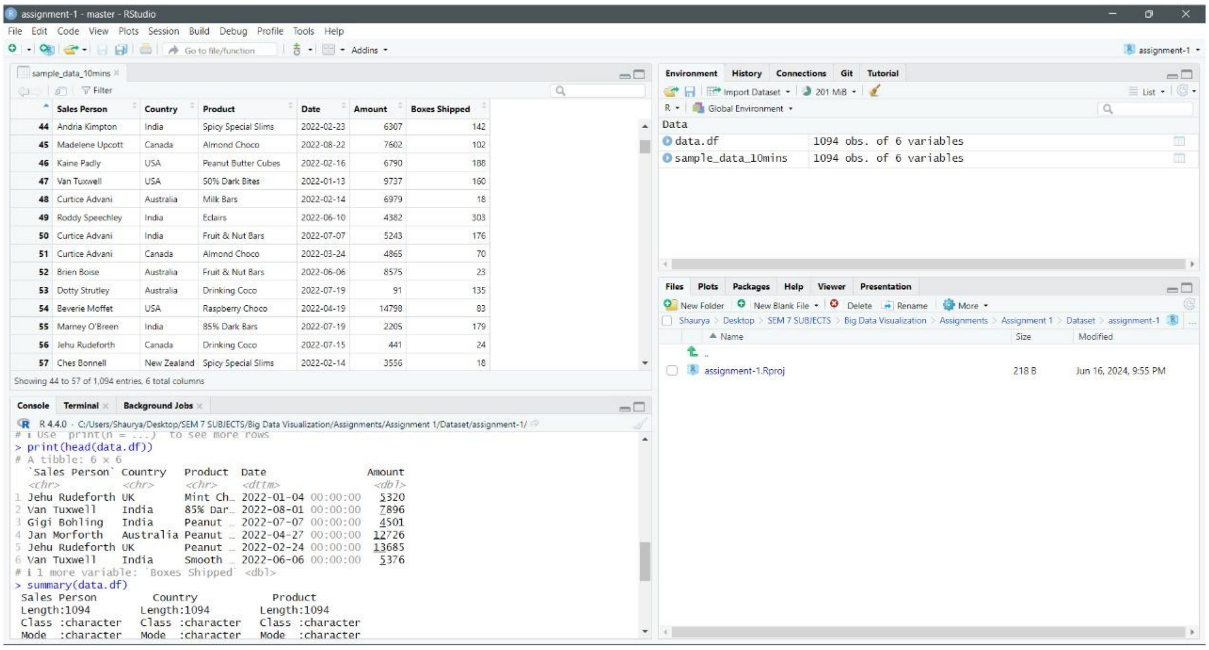
ASSIGNMENT 1

- **Shaurya Singh Srinet**

DATASET DETAILS- Sample Dataset taken from google

sample-data-10mins.xlsx

1. LOADING AND OVERVIEW OF THE DATA:



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	Sales Person	Country	Product	Date	Amount	Boxes Shipped
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	142
45	Madelene Upcott	Canada	Almond Choco	2022-08-22	7602	102
46	Kaine Padly	USA	Peanut Butter Cubes	2022-02-16	6790	188
47	Van Tuxwell	USA	50% Dark Bites	2022-01-13	9737	160
48	Curtice Advani	Australia	Milk Bars	2022-02-14	6979	18
49	Roddy Speechley	India	Eclairs	2022-06-10	4382	303
50	Curtice Advani	India	Fruit & Nut Bars	2022-07-07	5243	176
51	Curtice Advani	Canada	Almond Choco	2022-03-24	4865	70
52	Brien Boise	Australia	Fruit & Nut Bars	2022-06-06	8575	23
53	Dotty Strutley	Australia	Drinking Coco	2022-07-19	91	135
54	Beverie Moffet	USA	Raspberry Choco	2022-04-19	14798	83
55	Marney O'Breen	India	85% Dark Bars	2022-07-19	2205	179
56	Jehu Rudeforth	Canada	Drinking Coco	2022-07-15	441	24
57	Ches Bonnell	New Zealand	Spicy Special Slims	2022-02-14	3556	18

Showing 44 to 57 of 1,094 entries, 6 total columns

Data

data.df	1094 obs. of 6 variables	
sample_data_10mins	1094 obs. of 6 variables	

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```
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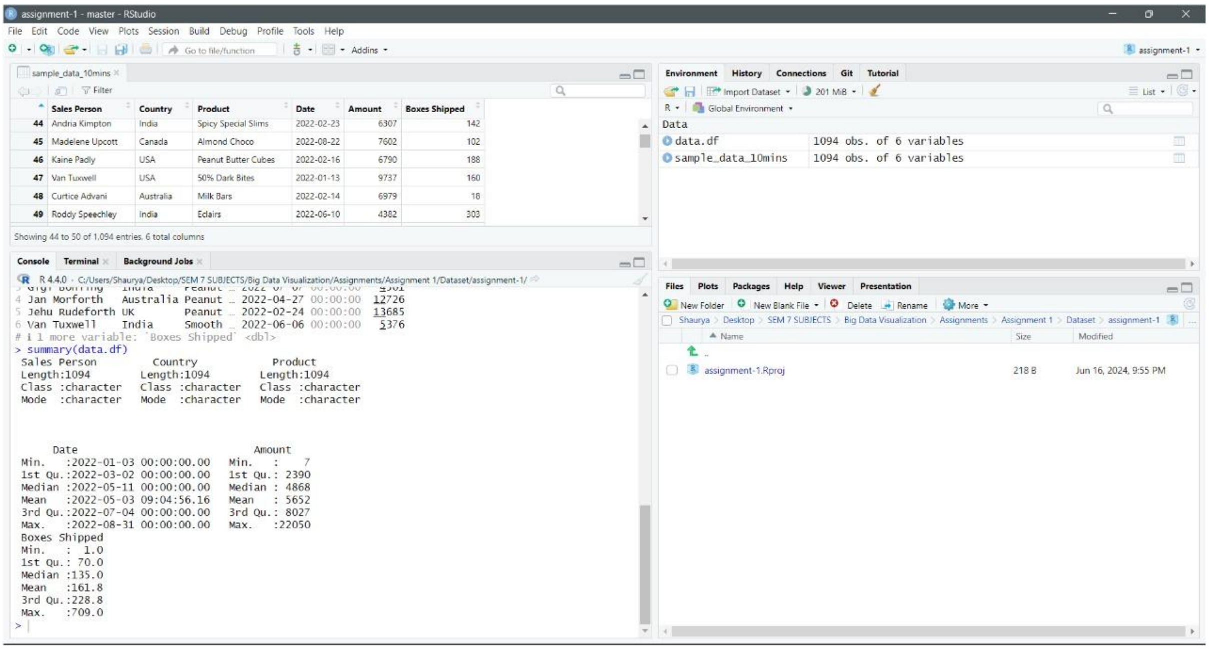
# i Use `print(n = ...)` to see more rows
> print(head(data.df))
# A tibble: 6 × 6
  `Sales Person` Country   Product  Date                Amount
  <chr>          <chr>     <chr>    <dttm>               <dbl>
1 Jehu Rudeforth UK        Mint Ch… 2022-01-04 00:00:00   5320
2 Van Tuxwell    India     85% Dar… 2022-08-01 00:00:00   7896
3 Gigi Bohling   India     Peanut … 2022-07-07 00:00:00   4501
4 Jan Morforth   Australia Peanut … 2022-04-27 00:00:00  12726
5 Jehu Rudeforth UK        Peanut … 2022-02-24 00:00:00  13685
6 Van Tuxwell    India     Smooth … 2022-06-06 00:00:00   5376
# i 1 more variable: `Boxes Shipped` <dbl>
> summary(data.df)
 Sales Person         Country            Product         
 Length:1094        Length:1094        Length:1094       
 Class :character   Class :character   Class :character  
 Mode  :character   Mode  :character   Mode  :character  
```



	Sales Person	Country	Product	Date	Amount	Boxes Shipped
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	142
45	Madelene Upcott	Canada	Almond Choco	2022-08-22	7602	102
46	Kaine Padly	USA	Peanut Butter Cubes	2022-02-16	6790	188
47	Van Tuxwell	USA	50% Dark Bites	2022-01-13	9737	160
48	Curtice Advani	Australia	Milk Bars	2022-02-14	6979	18
49	Roddy Speechley	India	Eclairs	2022-06-10	4382	303

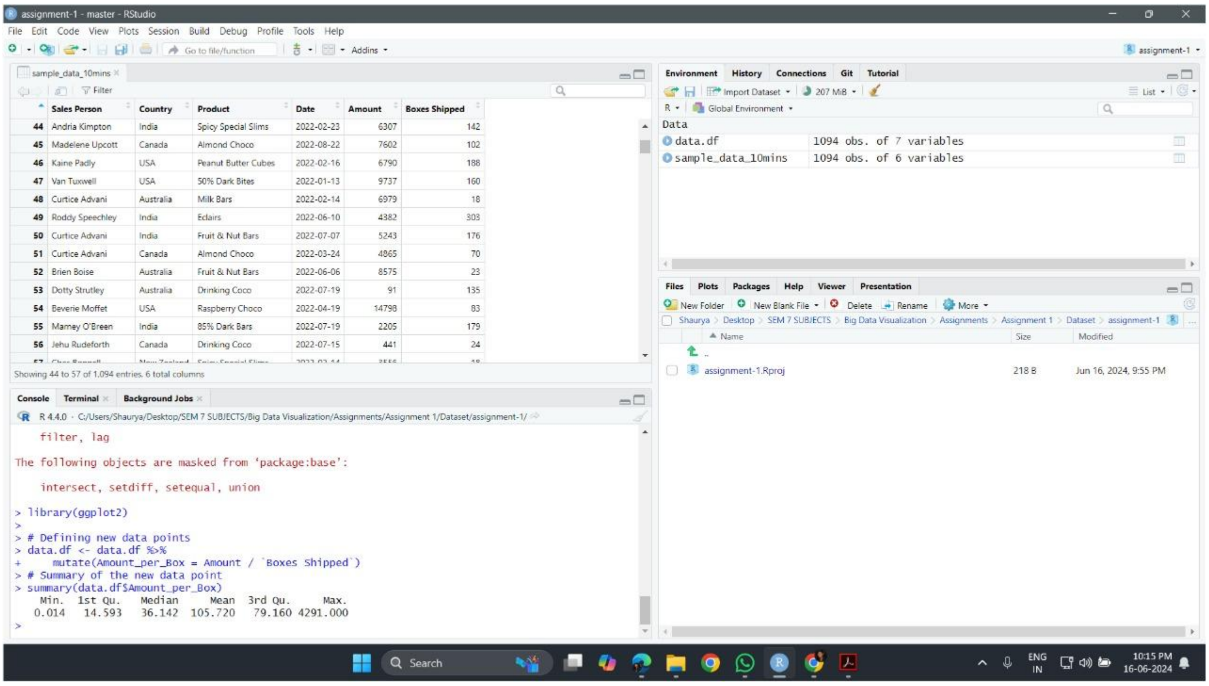
Showing 44 to 50 of 1,094 entries, 6 total columns

```
4 Jan Morforth   Australia Peanut … 2022-04-27 00:00:00  12726
5 Jehu Rudeforth UK        Peanut … 2022-02-24 00:00:00  13685
6 Van Tuxwell    India     Smooth … 2022-06-06 00:00:00   5376
# i 1 more variable: `Boxes Shipped` <dbl>
> summary(data.df)
 Sales Person         Country            Product         
 Length:1094        Length:1094        Length:1094       
 Class :character   Class :character   Class :character  
 Mode  :character   Mode  :character   Mode  :character  



      Date                          Amount     
 Min.   :2022-01-03 00:00:00.00   Min.   :    7  
 1st Qu.:2022-03-02 00:00:00.00   1st Qu.: 2390  
 Median :2022-05-11 00:00:00.00   Median : 4868  
 Mean   :2022-05-03 09:04:56.16   Mean   : 5652  
 3rd Qu.:2022-07-04 00:00:00.00   3rd Qu.: 8027  
 Max.   :2022-08-31 00:00:00.00   Max.   :22050  
 Boxes Shipped  
 Min.   :  1.0  
 1st Qu.: 70.0  
 Median :135.0  
 Mean   :161.8  
 3rd Qu.:228.8  
 Max.   :709.0  
> 
```

2. DEFINING NEW DATA POINTS:



sample_data_10mins

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	142
45	Madelene Upcott	Canada	Almond Choco	2022-08-22	7602	102
46	Kaine Padly	USA	Peanut Butter Cubes	2022-02-16	6790	188
47	Van Tuxwell	USA	50% Dark Bites	2022-01-13	9737	160
48	Curtice Advani	Australia	Milk Bars	2022-02-14	6979	18
49	Roddy Speechley	India	Eclairs	2022-06-10	4382	303
50	Curtice Advani	India	Fruit & Nut Bars	2022-07-07	5243	176
51	Curtice Advani	Canada	Almond Choco	2022-03-24	4865	70
52	Brien Boise	Australia	Fruit & Nut Bars	2022-06-06	8575	23
53	Dotty Strutley	Australia	Drinking Coco	2022-07-19	91	135
54	Beverie Moffet	USA	Raspberry Choco	2022-04-19	14798	83
55	Mamey O'Breen	India	85% Dark Bars	2022-07-19	2205	179
56	Jehu Rudeforth	Canada	Drinking Coco	2022-07-15	441	24

Showing 44 to 57 of 1,094 entries, 6 total columns

Data

```
data.df              1094 obs. of 7 variables
sample_data_10mins   1094 obs. of 6 variables
```

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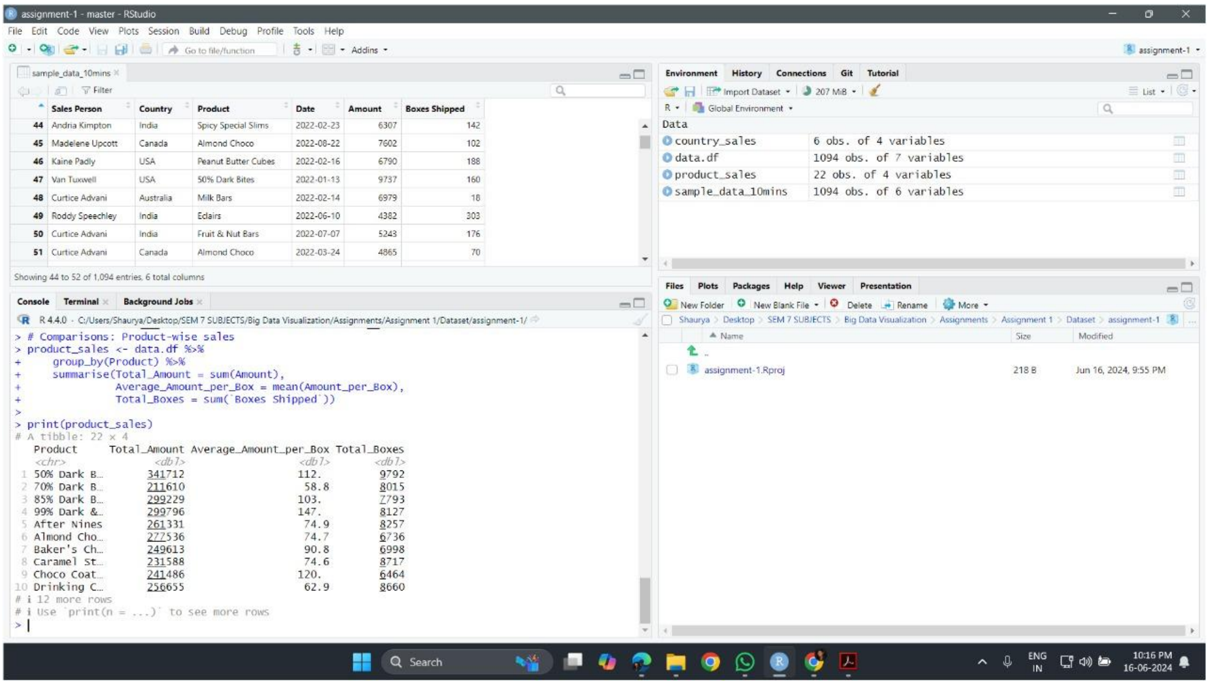
```
    filter, lag

The following objects are masked from ‘package:base’:

    intersect, setdiff, setequal, union

> library(ggplot2)
>
> # Defining new data points
> data.df <- data.df %>%
+     mutate(Amount_per_Box = Amount / `Boxes Shipped`)
> # Summary of the new data point
> summary(data.df$Amount_per_Box)
    Min.  1st Qu.   Median     Mean  3rd Qu.     Max.
   0.014   14.593   36.142  105.720   79.160 4291.000
>
```

3. COMPARISONS:



sample_data_10mins

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	142
45	Madelene Upcott	Canada	Almond Choco	2022-08-22	7602	102
46	Kaine Padly	USA	Peanut Butter Cubes	2022-02-16	6790	188
47	Van Tuxwell	USA	50% Dark Bites	2022-01-13	9737	160
48	Curtice Advani	Australia	Milk Bars	2022-02-14	6979	18
49	Roddy Speechley	India	Eclairs	2022-06-10	4382	303
50	Curtice Advani	India	Fruit & Nut Bars	2022-07-07	5243	176
51	Curtice Advani	Canada	Almond Choco	2022-03-24	4865	70

Showing 44 to 52 of 1,094 entries, 6 total columns

Data

```
country_sales        6 obs. of 4 variables
data.df              1094 obs. of 7 variables
product_sales        22 obs. of 4 variables
sample_data_10mins   1094 obs. of 6 variables
```

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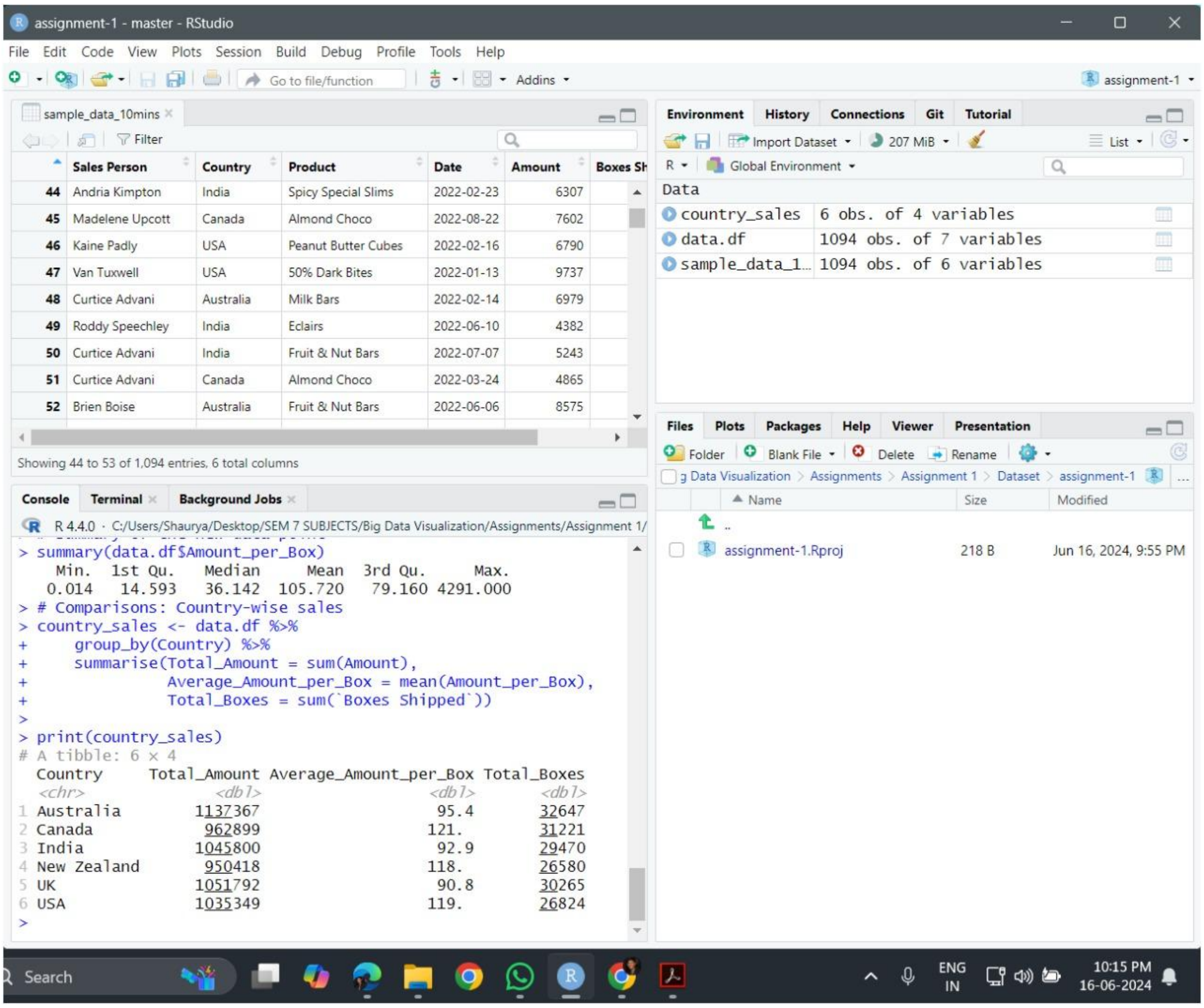
```
> # Comparisons: Product-wise sales
> product_sales <- data.df %>%
+     group_by(Product) %>%
+     summarise(Total_Amount = sum(Amount),
+               Average_Amount_per_Box = mean(Amount_per_Box),
+               Total_Boxes = sum(`Boxes Shipped`))
>
> print(product_sales)
# A tibble: 22 × 4
   Product      Total_Amount Average_Amount_per_Box Total_Boxes
   <chr>               <dbl>                  <dbl>       <dbl>
 1 50% Dark B…        341712                  112.         9792
 2 70% Dark B…        211610                   58.8        8015
 3 85% Dark B…        299229                  103.         7793
 4 99% Dark &…        299796                  147.         8127
 5 After Nines        261331                   74.9        8257
 6 Almond Cho…        277536                   74.7        6736
 7 Baker's Ch…        249613                   90.8        6998
 8 Caramel St…        231588                   74.6        8717
 9 Choco Coat…        241486                  120.         6464
10 Drinking C…        256655                   62.9        8660
# ℹ 12 more rows
# ℹ Use `print(n = ...)` to see more rows
> |
```



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sample_data_10mins

	Sales Person	Country	Product	Date	Amount	Boxes Sh
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	
45	Madelene Upcott	Canada	Almond Choco	2022-08-22	7602	
46	Kaine Padly	USA	Peanut Butter Cubes	2022-02-16	6790	
47	Van Tuxwell	USA	50% Dark Bites	2022-01-13	9737	
48	Curtice Advani	Australia	Milk Bars	2022-02-14	6979	
49	Roddy Speechley	India	Eclairs	2022-06-10	4382	
50	Curtice Advani	India	Fruit & Nut Bars	2022-07-07	5243	
51	Curtice Advani	Canada	Almond Choco	2022-03-24	4865	
52	Brien Boise	Australia	Fruit & Nut Bars	2022-06-06	8575	

Showing 44 to 53 of 1,094 entries, 6 total columns

Global Environment

```
Data
country_sales      6 obs. of 4 variables
data.df            1094 obs. of 7 variables
sample_data_1…     1094 obs. of 6 variables
```

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```
> summary(data.df$Amount_per_Box)
    Min.  1st Qu.   Median     Mean  3rd Qu.     Max. 
   0.014   14.593   36.142  105.720   79.160 4291.000 
> # Comparisons: Country-wise sales
> country_sales <- data.df %>%
+     group_by(Country) %>%
+     summarise(Total_Amount = sum(Amount),
+               Average_Amount_per_Box = mean(Amount_per_Box),
+               Total_Boxes = sum(`Boxes Shipped`))
> 
> print(country_sales)
# A tibble: 6 × 4
  Country     Total_Amount Average_Amount_per_Box Total_Boxes
  <chr>              <dbl>                  <dbl>       <dbl>
1 Australia        1137367                   95.4       32647
2 Canada            962899                  121.        31221
3 India            1045800                   92.9       29470
4 New Zealand       950418                  118.        26580
5 UK               1051792                   90.8       30265
6 USA              1035349                  119.        26824
> 
```

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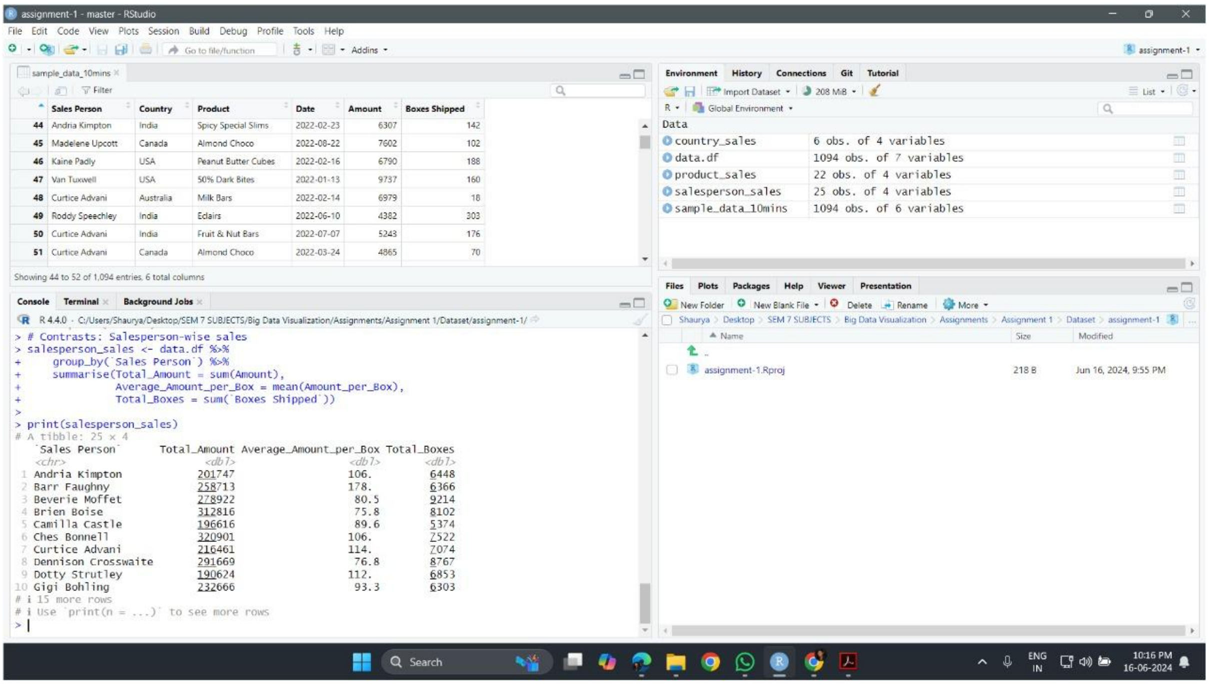

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sample_data_10mins

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	142
45	Madelene Upcott	Canada	Almond Choco	2022-08-22	7602	102
46	Kaine Padly	USA	Peanut Butter Cubes	2022-02-16	6790	188
47	Van Tuxwell	USA	50% Dark Bites	2022-01-13	9737	160
48	Curtice Advani	Australia	Milk Bars	2022-02-14	6979	18
49	Roddy Speechley	India	Eclairs	2022-06-10	4382	303
50	Curtice Advani	India	Fruit & Nut Bars	2022-07-07	5243	176
51	Curtice Advani	Canada	Almond Choco	2022-03-24	4865	70

Showing 44 to 52 of 1,094 entries, 6 total columns

Global Environment

```
Data
country_sales       6 obs. of 4 variables
data.df             1094 obs. of 7 variables
product_sales       22 obs. of 4 variables
salesperson_sales   25 obs. of 4 variables
sample_data_10mins  1094 obs. of 6 variables
```

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```
> # Contrasts: Salesperson-wise sales
> salesperson_sales <- data.df %>%
+     group_by(`Sales Person`) %>%
+     summarise(Total_Amount = sum(Amount),
+               Average_Amount_per_Box = mean(Amount_per_Box),
+               Total_Boxes = sum(`Boxes Shipped`))
> 
> print(salesperson_sales)
# A tibble: 25 × 4
   `Sales Person`      Total_Amount Average_Amount_per_Box Total_Boxes
   <chr>                      <dbl>                  <dbl>       <dbl>
 1 Andria Kimpton            201747                  106.         6448
 2 Barr Faughny              258713                  178.         6366
 3 Beverie Moffet            278922                   80.5        9214
 4 Brien Boise               312816                   75.8        8102
 5 Camilla Castle            196616                   89.6        5374
 6 Ches Bonnell              320901                  106.         7522
 7 Curtice Advani            216461                  114.         7074
 8 Dennison Crosswaite       291669                   76.8        8767
 9 Dotty Strutley            190624                  112.         6853
10 Gigi Bohling              232666                   93.3        6303
# ℹ 15 more rows
# ℹ Use `print(n = ...)` to see more rows
> 
```

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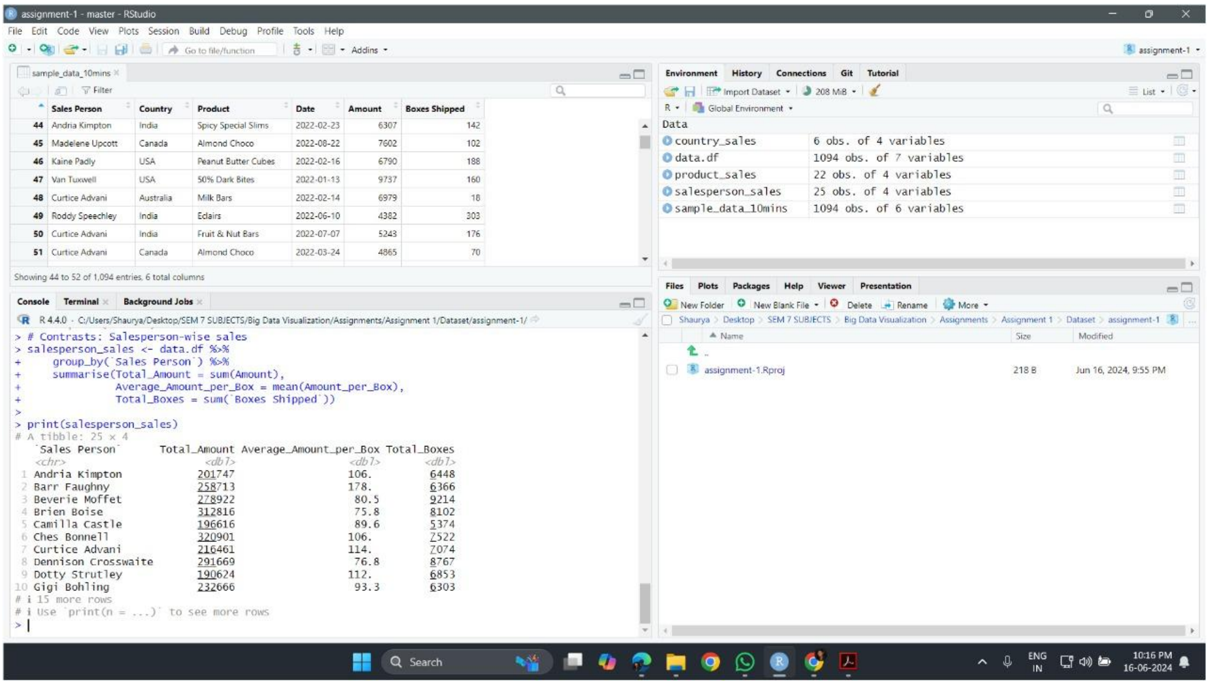
4. CONTRASTS:



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Console Terminal Background Jobs
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	Sales Person	Country	Product	Date	Amount	Boxes Shipped
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	142
45	Madelene Upcott	Canada	Almond Choco	2022-08-22	7602	102
46	Kaine Padly	USA	Peanut Butter Cubes	2022-02-16	6790	188
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51	Curtice Advani	Canada	Almond Choco	2022-03-24	4865	70

Showing 44 to 52 of 1,094 entries, 6 total columns

```
Data
country_sales        6 obs. of 4 variables
data.df              1094 obs. of 7 variables
product_sales        22 obs. of 4 variables
salesperson_sales    25 obs. of 4 variables
sample_data_10mins   1094 obs. of 6 variables
```

Name	Size	Modified
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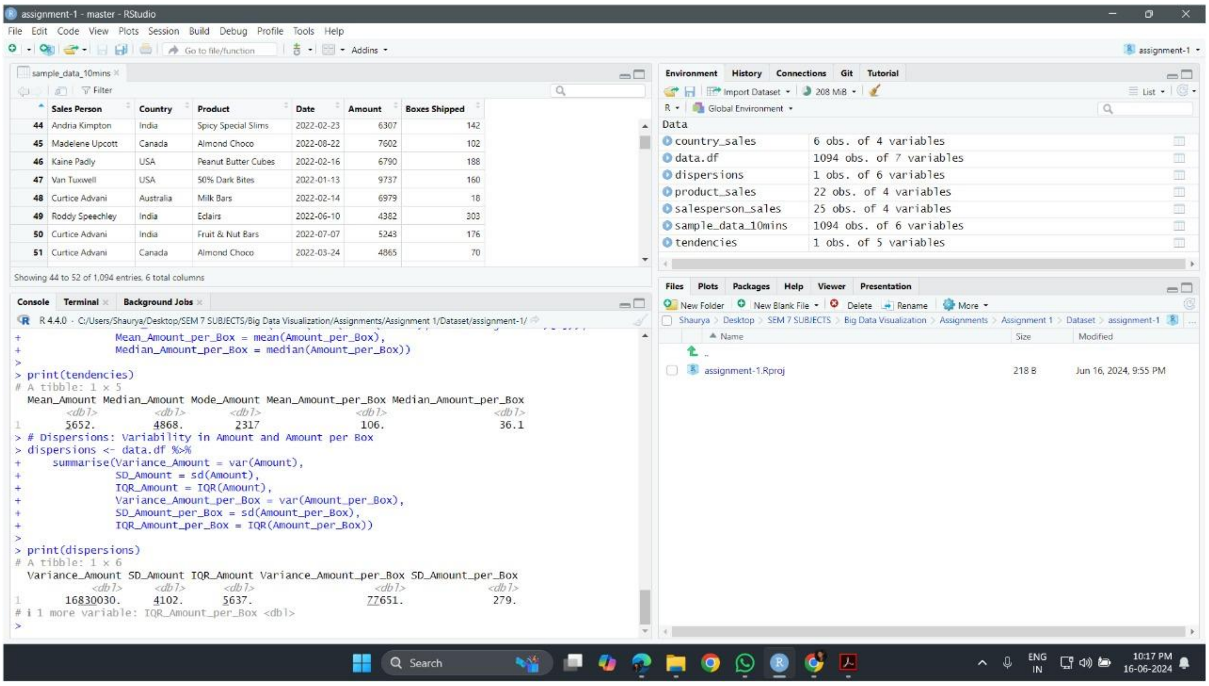
```
> # Contrasts: Salesperson-wise sales
> salesperson_sales <- data.df %>%
+     group_by(`Sales Person`) %>%
+     summarise(Total_Amount = sum(Amount),
+               Average_Amount_per_Box = mean(Amount_per_Box),
+               Total_Boxes = sum(`Boxes Shipped`))
>
> print(salesperson_sales)
# A tibble: 25 × 4
   `Sales Person`      Total_Amount Average_Amount_per_Box Total_Boxes
   <chr>                      <dbl>                  <dbl>       <dbl>
 1 Andria Kimpton            201747                  106.         6448
 2 Barr Faughny              258713                  178.         6366
 3 Beverie Moffet            278922                   80.5        9214
 4 Brien Boise               312816                   75.8        8102
 5 Camilla Castle            196616                   89.6        5374
 6 Ches Bonnell              320901                  106.         7522
 7 Curtice Advani            216461                  114.         7074
 8 Dennison Crosswaite       291669                   76.8        8767
 9 Dotty Strutley            190624                  112.         6853
10 Gigi Bohling              232666                   93.3        6303
# ℹ 15 more rows
# ℹ Use `print(n = ...)` to see more rows
> |
```

5. IDENTIFYING TENDENCIES:



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New Blank File
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More
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Console Terminal Background Jobs
Search
ENG IN
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	Sales Person	Country	Product	Date	Amount	Boxes Shipped
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	142
45	Madelene Upcott	Canada	Almond Choco	2022-08-22	7602	102
46	Kaine Padly	USA	Peanut Butter Cubes	2022-02-16	6790	188
47	Van Tuxwell	USA	50% Dark Bites	2022-01-13	9737	160
48	Curtice Advani	Australia	Milk Bars	2022-02-14	6979	18
49	Roddy Speechley	India	Eclairs	2022-06-10	4382	303
50	Curtice Advani	India	Fruit & Nut Bars	2022-07-07	5243	176
51	Curtice Advani	Canada	Almond Choco	2022-03-24	4865	70

Showing 44 to 52 of 1,094 entries, 6 total columns

```
Data
country_sales        6 obs. of 4 variables
data.df              1094 obs. of 7 variables
dispersions          1 obs. of 6 variables
product_sales        22 obs. of 4 variables
salesperson_sales    25 obs. of 4 variables
sample_data_10mins   1094 obs. of 6 variables
tendencies           1 obs. of 5 variables
```

Name	Size	Modified
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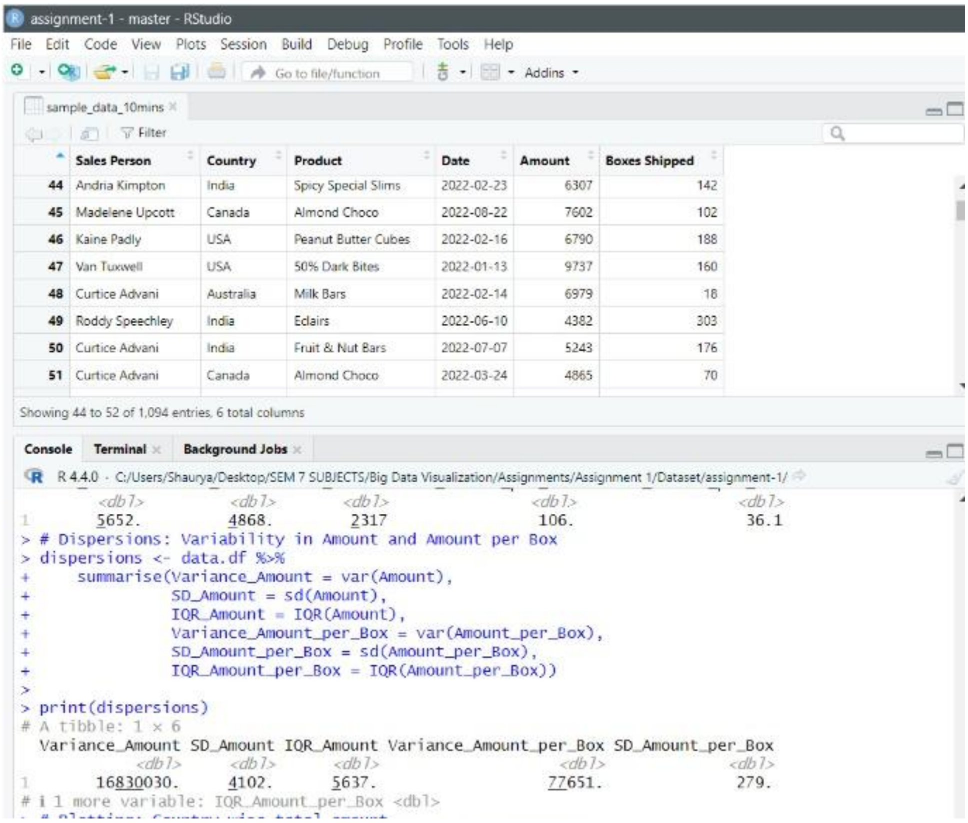
```
+               Mean_Amount_per_Box = mean(Amount_per_Box),
+               Median_Amount_per_Box = median(Amount_per_Box))
>
> print(tendencies)
# A tibble: 1 × 5
  Mean_Amount Median_Amount Mode_Amount Mean_Amount_per_Box Median_Amount_per_Box
        <dbl>         <dbl>       <dbl>               <dbl>                 <dbl>
1       5652.         4868.        2317                106.                  36.1
> # Dispersions: Variability in Amount and Amount per Box
> dispersions <- data.df %>%
+     summarise(Variance_Amount = var(Amount),
+               SD_Amount = sd(Amount),
+               IQR_Amount = IQR(Amount),
+               Variance_Amount_per_Box = var(Amount_per_Box),
+               SD_Amount_per_Box = sd(Amount_per_Box),
+               IQR_Amount_per_Box = IQR(Amount_per_Box))
>
> print(dispersions)
# A tibble: 1 × 6
  Variance_Amount SD_Amount IQR_Amount Variance_Amount_per_Box SD_Amount_per_Box
            <dbl>     <dbl>      <dbl>                   <dbl>             <dbl>
1       16830030.     4102.      5637.                  77651.              279.
# ℹ 1 more variable: IQR_Amount_per_Box <dbl>
>
```

6. DISPERSIONS:



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	Sales Person	Country	Product	Date	Amount	Boxes Shipped
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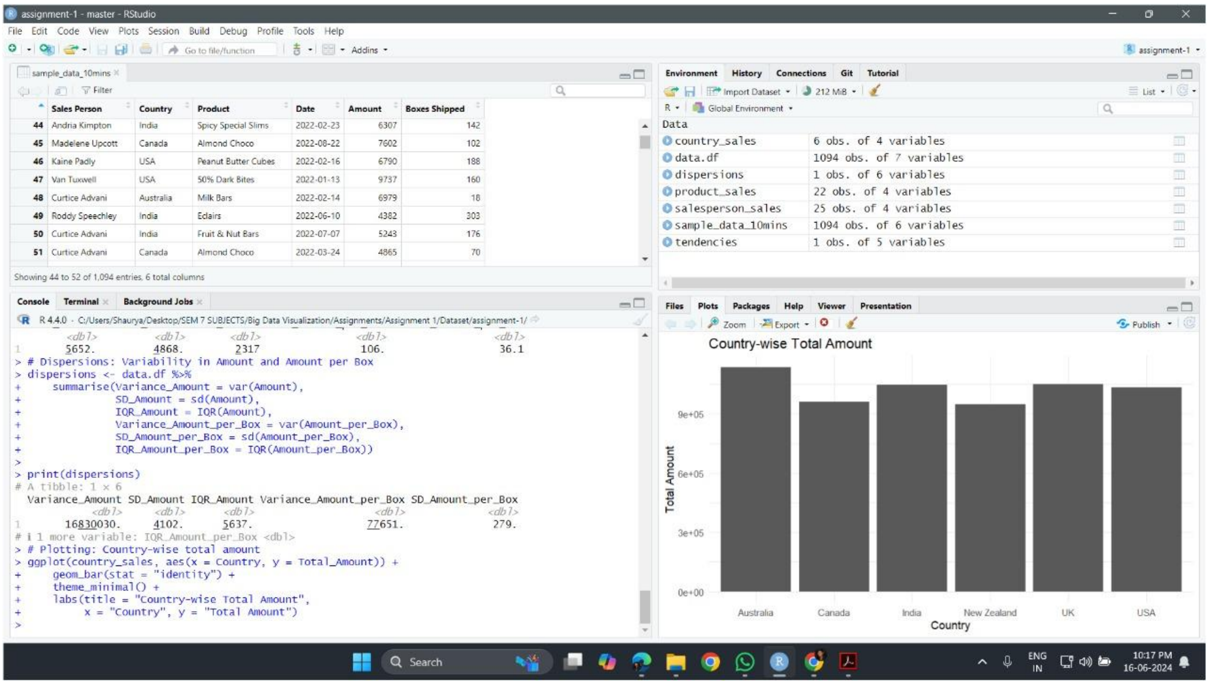
50	Curtice Advani	India	Fruit & Nut Bars	2022-07-07	5243	176
51	Curtice Advani	Canada	Almond Choco	2022-03-24	4865	70

Showing 44 to 52 of 1,094 entries, 6 total columns

```
       <dbl>        <dbl>        <dbl>                   <dbl>                  <dbl>
1      5652.        4868.        2317                    106.                   36.1
> # Dispersions: Variability in Amount and Amount per Box
> dispersions <- data.df %>%
+     summarise(Variance_Amount = var(Amount),
+               SD_Amount = sd(Amount),
+               IQR_Amount = IQR(Amount),
+               Variance_Amount_per_Box = var(Amount_per_Box),
+               SD_Amount_per_Box = sd(Amount_per_Box),
+               IQR_Amount_per_Box = IQR(Amount_per_Box))
>
> print(dispersions)
# A tibble: 1 × 6
  Variance_Amount SD_Amount IQR_Amount Variance_Amount_per_Box SD_Amount_per_Box
            <dbl>     <dbl>      <dbl>                   <dbl>             <dbl>
1       16830030.     4102.      5637.                  77651.              279.
# ℹ 1 more variable: IQR_Amount_per_Box <dbl>
```

7. PLOTTING:



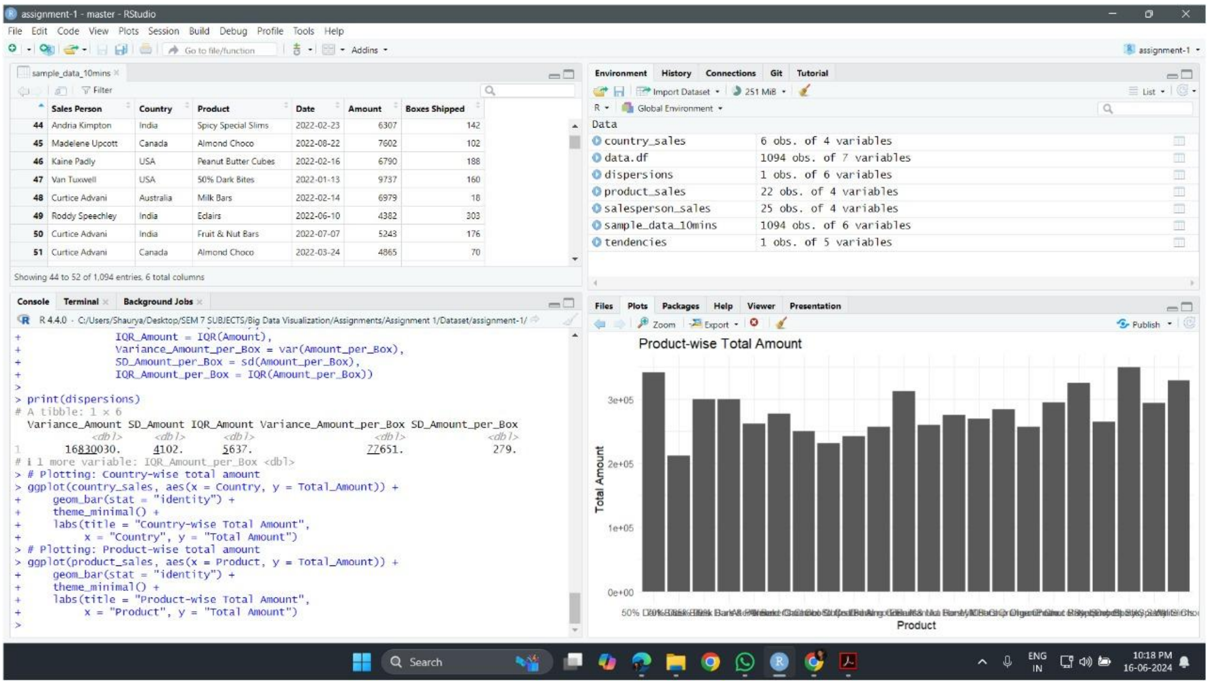
	Sales Person	Country	Product	Date	Amount	Boxes Shipped
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	142
45	Madelene Upcott	Canada	Almond Choco	2022-08-22	7602	102
46	Kaine Padly	USA	Peanut Butter Cubes	2022-02-16	6790	188
47	Van Tuxwell	USA	50% Dark Bites	2022-01-13	9737	160
48	Curtice Advani	Australia	Milk Bars	2022-02-14	6979	18
49	Roddy Speechley	India	Eclairs	2022-06-10	4382	303
50	Curtice Advani	India	Fruit & Nut Bars	2022-07-07	5243	176
51	Curtice Advani	Canada	Almond Choco	2022-03-24	4865	70

Showing 44 to 52 of 1,094 entries, 6 total columns

Data	
country_sales	6 obs. of 4 variables
data.df	1094 obs. of 7 variables
dispersions	1 obs. of 6 variables
product_sales	22 obs. of 4 variables
salesperson_sales	25 obs. of 4 variables
sample_data_10mins	1094 obs. of 6 variables
tendencies	1 obs. of 5 variables

```
       <dbl>        <dbl>        <dbl>                   <dbl>                  <dbl>
1      5652.        4868.        2317                    106.                   36.1
> # Dispersions: Variability in Amount and Amount per Box
> dispersions <- data.df %>%
+     summarise(Variance_Amount = var(Amount),
+               SD_Amount = sd(Amount),
+               IQR_Amount = IQR(Amount),
+               Variance_Amount_per_Box = var(Amount_per_Box),
+               SD_Amount_per_Box = sd(Amount_per_Box),
+               IQR_Amount_per_Box = IQR(Amount_per_Box))
>
> print(dispersions)
# A tibble: 1 × 6
  Variance_Amount SD_Amount IQR_Amount Variance_Amount_per_Box SD_Amount_per_Box
            <dbl>     <dbl>      <dbl>                   <dbl>             <dbl>
1       16830030.     4102.      5637.                  77651.              279.
# ℹ 1 more variable: IQR_Amount_per_Box <dbl>
```

```
> # Plotting: Country-wise total amount
> ggplot(country_sales, aes(x = Country, y = Total_Amount)) +
+     geom_bar(stat = "identity") +
+     theme_minimal() +
+     labs(title = "Country-wise Total Amount",
+          x = "Country", y = "Total Amount")
>
```


assignment-1 - master - RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
assignment-1
sample_data_10mins
Filter
Environment History Connections Git Tutorial
Import Dataset
251 MiB
List
Global Environment
Console Terminal Background Jobs
Files Plots Packages Help Viewer Presentation
Zoom Export Publish
Product-wise Total Amount
Total Amount
3e+05
2e+05
1e+05
0e+00
Product
Search
ENG IN
10:18 PM 16-06-2024

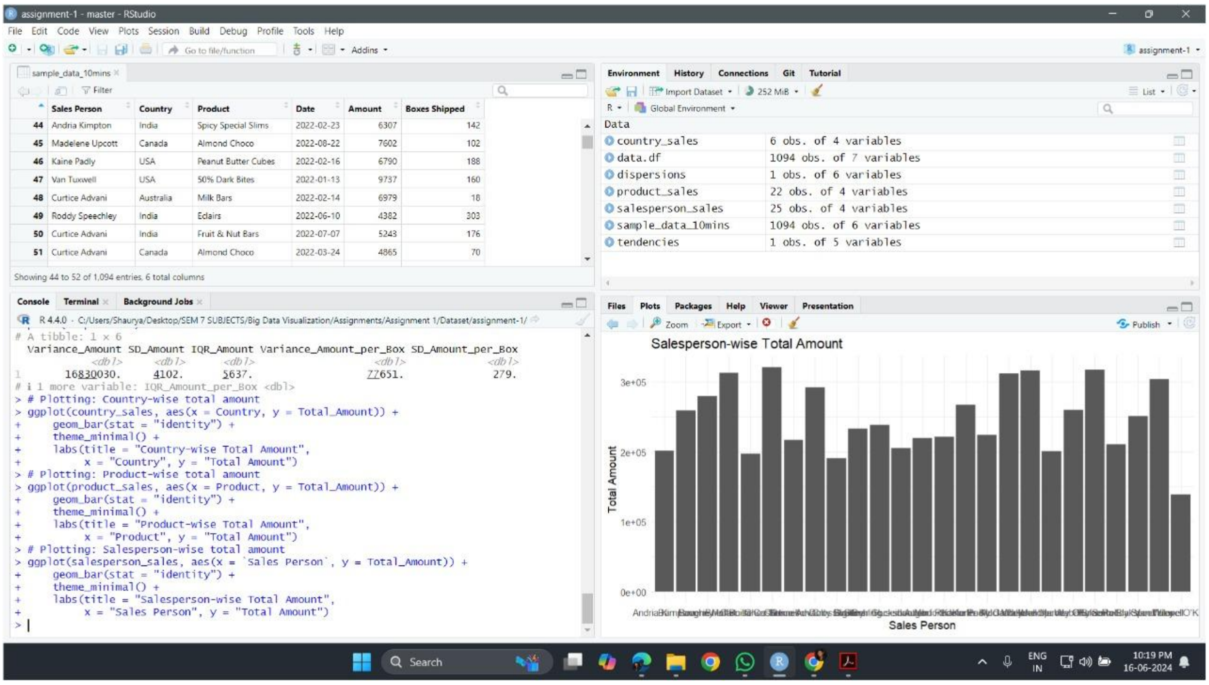
	Sales Person	Country	Product	Date	Amount	Boxes Shipped
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	142
45	Madelene Upcott	Canada	Almond Choco	2022-08-22	7602	102
46	Kaine Padly	USA	Peanut Butter Cubes	2022-02-16	6790	188
47	Van Tuxwell	USA	50% Dark Bites	2022-01-13	9737	160
48	Curtice Advani	Australia	Milk Bars	2022-02-14	6979	18
49	Roddy Speechley	India	Eclairs	2022-06-10	4382	303
50	Curtice Advani	India	Fruit & Nut Bars	2022-07-07	5243	176
51	Curtice Advani	Canada	Almond Choco	2022-03-24	4865	70

Showing 44 to 52 of 1,094 entries, 6 total columns

```
Data
country_sales          6 obs. of 4 variables
data.df                1094 obs. of 7 variables
dispersions            1 obs. of 6 variables
product_sales          22 obs. of 4 variables
salesperson_sales      25 obs. of 4 variables
sample_data_10mins     1094 obs. of 6 variables
tendencies             1 obs. of 5 variables
```

R 4.4.0 · C:/Users/Shaurya/Desktop/SEM 7 SUBJECTS/Big Data Visualization/Assignments/Assignment 1/Dataset/assignment-1/

```
+                IQR_Amount = IQR(Amount),
+                Variance_Amount_per_Box = var(Amount_per_Box),
+                SD_Amount_per_Box = sd(Amount_per_Box),
+                IQR_Amount_per_Box = IQR(Amount_per_Box))
>
> print(dispersions)
# A tibble: 1 × 6
  Variance_Amount SD_Amount IQR_Amount Variance_Amount_per_Box SD_Amount_per_Box
            <dbl>     <dbl>      <dbl>                   <dbl>             <dbl>
1       16830030.     4102.      5637.                  77651.              279.
# ℹ 1 more variable: IQR_Amount_per_Box <dbl>
> # Plotting: Country-wise total amount
> ggplot(country_sales, aes(x = Country, y = Total_Amount)) +
+     geom_bar(stat = "identity") +
+     theme_minimal() +
+     labs(title = "Country-wise Total Amount",
+          x = "Country", y = "Total Amount")
> # Plotting: Product-wise total amount
> ggplot(product_sales, aes(x = Product, y = Total_Amount)) +
+     geom_bar(stat = "identity") +
+     theme_minimal() +
+     labs(title = "Product-wise Total Amount",
+          x = "Product", y = "Total Amount")
>
```


assignment-1 - master - RStudio
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sample_data_10mins
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252 MiB
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Global Environment
Console Terminal Background Jobs
Files Plots Packages Help Viewer Presentation
Zoom Export Publish
Salesperson-wise Total Amount
Total Amount
3e+05
2e+05
1e+05
0e+00
Sales Person
Search
ENG IN
10:19 PM 16-06-2024

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	142
45	Madelene Upcott	Canada	Almond Choco	2022-08-22	7602	102
46	Kaine Padly	USA	Peanut Butter Cubes	2022-02-16	6790	188
47	Van Tuxwell	USA	50% Dark Bites	2022-01-13	9737	160
48	Curtice Advani	Australia	Milk Bars	2022-02-14	6979	18
49	Roddy Speechley	India	Eclairs	2022-06-10	4382	303
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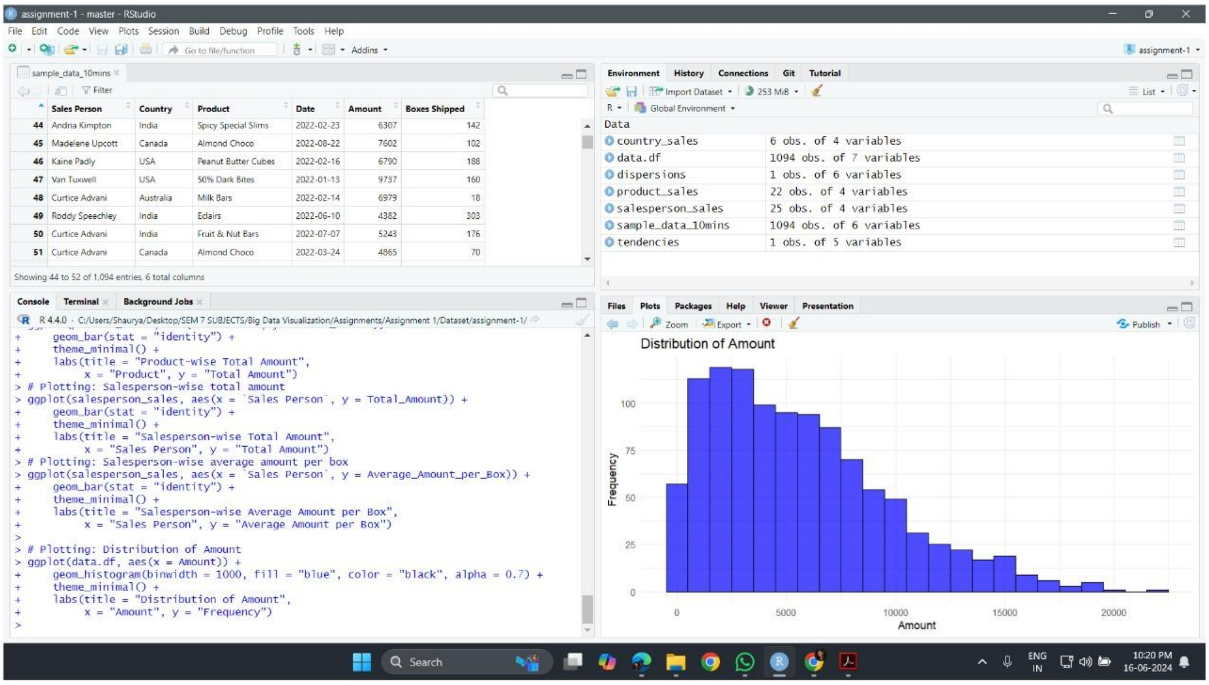
51	Curtice Advani	Canada	Almond Choco	2022-03-24	4865	70

Showing 44 to 52 of 1,094 entries, 6 total columns

```
Data
country_sales          6 obs. of 4 variables
data.df                1094 obs. of 7 variables
dispersions            1 obs. of 6 variables
product_sales          22 obs. of 4 variables
salesperson_sales      25 obs. of 4 variables
sample_data_10mins     1094 obs. of 6 variables
tendencies             1 obs. of 5 variables
```

R 4.4.0 · C:/Users/Shaurya/Desktop/SEM 7 SUBJECTS/Big Data Visualization/Assignments/Assignment 1/Dataset/assignment-1/

```
# A tibble: 1 × 6
  Variance_Amount SD_Amount IQR_Amount Variance_Amount_per_Box SD_Amount_per_Box
            <dbl>     <dbl>      <dbl>                   <dbl>             <dbl>
1       16830030.     4102.      5637.                  77651.              279.
# ℹ 1 more variable: IQR_Amount_per_Box <dbl>
> # Plotting: Country-wise total amount
> ggplot(country_sales, aes(x = Country, y = Total_Amount)) +
+     geom_bar(stat = "identity") +
+     theme_minimal() +
+     labs(title = "Country-wise Total Amount",
+          x = "Country", y = "Total Amount")
> # Plotting: Product-wise total amount
> ggplot(product_sales, aes(x = Product, y = Total_Amount)) +
+     geom_bar(stat = "identity") +
+     theme_minimal() +
+     labs(title = "Product-wise Total Amount",
+          x = "Product", y = "Total Amount")
> # Plotting: Salesperson-wise total amount
> ggplot(salesperson_sales, aes(x = `Sales Person`, y = Total_Amount)) +
+     geom_bar(stat = "identity") +
+     theme_minimal() +
+     labs(title = "Salesperson-wise Total Amount",
+          x = "Sales Person", y = "Total Amount")
> 
```



	Sales Person	Country	Product	Date	Amount	Boxes Shipped
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	142
45	Madelene Upcott	Canada	Almond Choco	2022-08-22	7602	102
46	Kaine Padly	USA	Peanut Butter Cubes	2022-02-16	6790	188
47	Van Tuxwell	USA	50% Dark Bites	2022-01-13	9737	160
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Showing 44 to 52 of 1,094 entries, 6 total columns

Data

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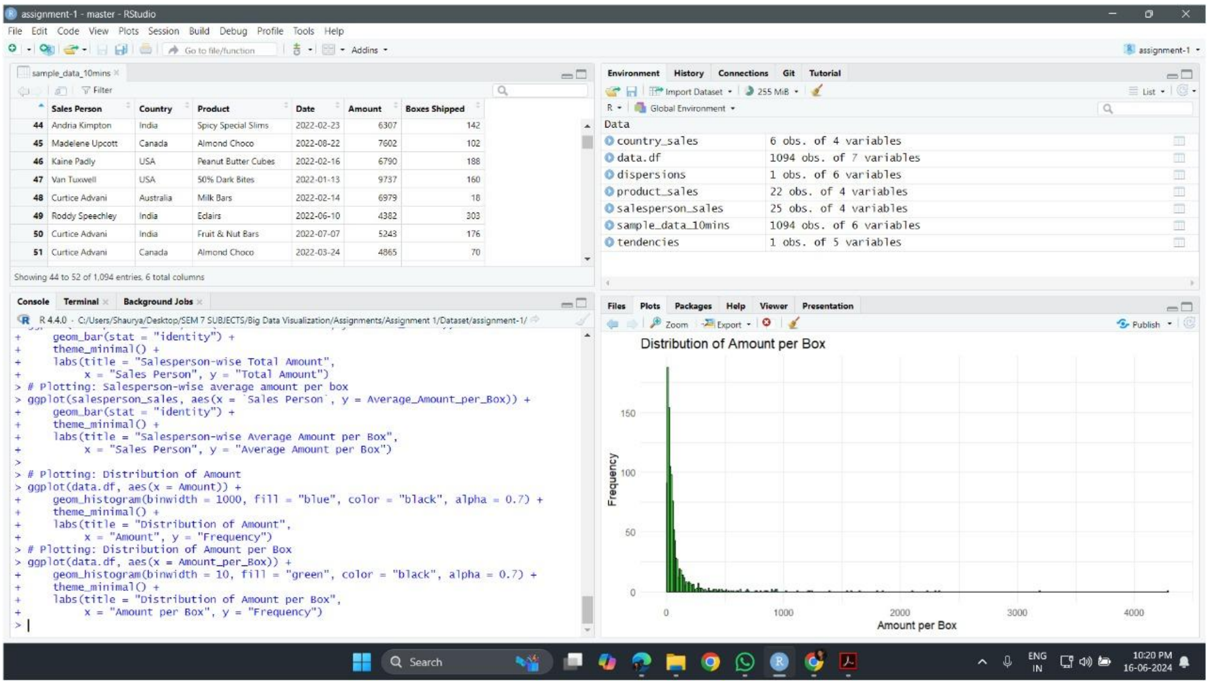
R 4.4.0 · C:/Users/Shaurya/Desktop/SEM 7 SUBJECTS/Big Data Visualization/Assignments/Assignment 1/Dataset/assignment-1/

```
+     geom_bar(stat = "identity") +
+     theme_minimal() +
+     labs(title = "Product-wise Total Amount",
+          x = "Product", y = "Total Amount")
> # Plotting: Salesperson-wise total amount
> ggplot(salesperson_sales, aes(x = `Sales Person`, y = Total_Amount)) +
+     geom_bar(stat = "identity") +
+     theme_minimal() +
+     labs(title = "Salesperson-wise Total Amount",
+          x = "Sales Person", y = "Total Amount")
> # Plotting: Salesperson-wise average amount per box
> ggplot(salesperson_sales, aes(x = `Sales Person`, y = Average_Amount_per_Box)) +
+     geom_bar(stat = "identity") +
+     theme_minimal() +
+     labs(title = "Salesperson-wise Average Amount per Box",
+          x = "Sales Person", y = "Average Amount per Box")
>
> # Plotting: Distribution of Amount
> ggplot(data.df, aes(x = Amount)) +
+     geom_histogram(binwidth = 1000, fill = "blue", color = "black", alpha = 0.7) +
+     theme_minimal() +
+     labs(title = "Distribution of Amount",
+          x = "Amount", y = "Frequency")
>
```



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sample_data_10mins
Filter
Environment History Connections Git Tutorial
Import Dataset
255 MiB
List
R
Global Environment
Console Terminal Background Jobs
Files Plots Packages Help Viewer Presentation
Zoom Export Publish
Distribution of Amount per Box
Frequency
0
50
100
150
0
1000
2000
3000
4000
Amount per Box
Search
ENG IN
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	Sales Person	Country	Product	Date	Amount	Boxes Shipped
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	142
45	Madelene Upcott	Canada	Almond Choco	2022-08-22	7602	102
46	Kaine Padly	USA	Peanut Butter Cubes	2022-02-16	6790	188
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Showing 44 to 52 of 1,094 entries, 6 total columns

Data

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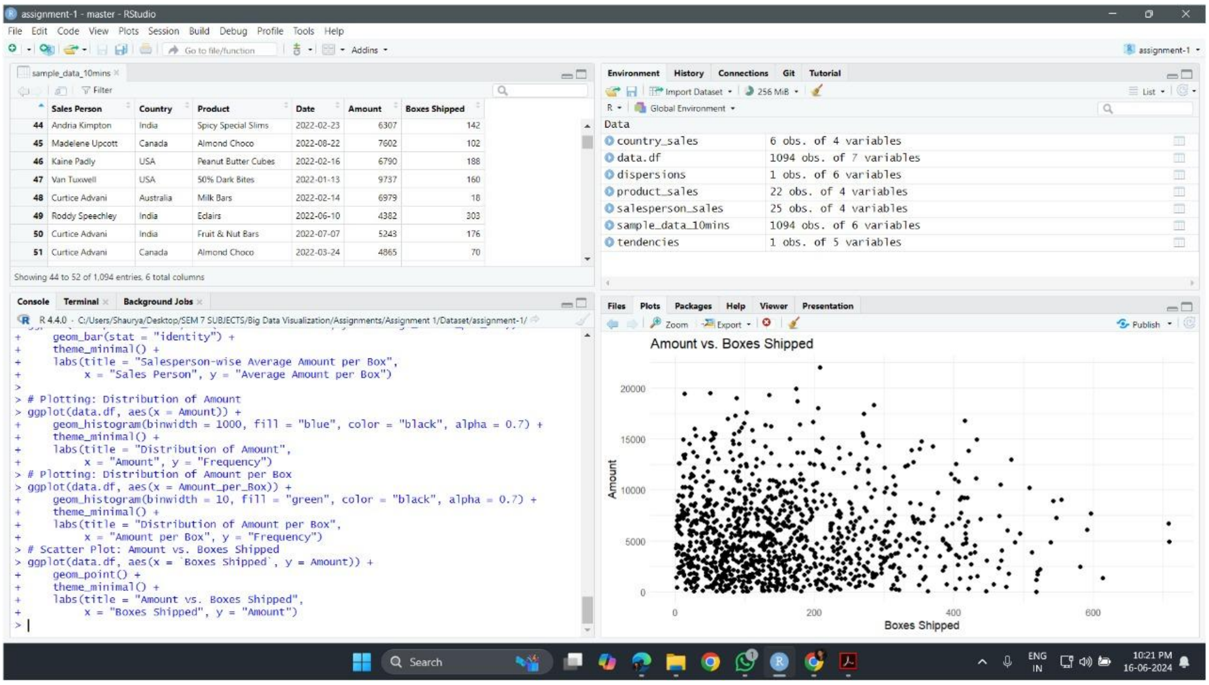
R 4.4.0 · C:/Users/Shaurya/Desktop/SEM 7 SUBJECTS/Big Data Visualization/Assignments/Assignment 1/Dataset/assignment-1/

```
+     geom_bar(stat = "identity") +
+     theme_minimal() +
+     labs(title = "Salesperson-wise Total Amount",
+          x = "Sales Person", y = "Total Amount")
> # Plotting: Salesperson-wise average amount per box
> ggplot(salesperson_sales, aes(x = `Sales Person`, y = Average_Amount_per_Box)) +
+     geom_bar(stat = "identity") +
+     theme_minimal() +
+     labs(title = "Salesperson-wise Average Amount per Box",
+          x = "Sales Person", y = "Average Amount per Box")
>
> # Plotting: Distribution of Amount
> ggplot(data.df, aes(x = Amount)) +
+     geom_histogram(binwidth = 1000, fill = "blue", color = "black", alpha = 0.7) +
+     theme_minimal() +
+     labs(title = "Distribution of Amount",
+          x = "Amount", y = "Frequency")
> # Plotting: Distribution of Amount per Box
> ggplot(data.df, aes(x = Amount_per_Box)) +
+     geom_histogram(binwidth = 10, fill = "green", color = "black", alpha = 0.7) +
+     theme_minimal() +
+     labs(title = "Distribution of Amount per Box",
+          x = "Amount per Box", y = "Frequency")
> |
```



	Sales Person	Country	Product	Date	Amount	Boxes Shipped
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	142
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Showing 44 to 52 of 1,094 entries, 6 total columns

```
Data
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data.df                1094 obs. of 7 variables
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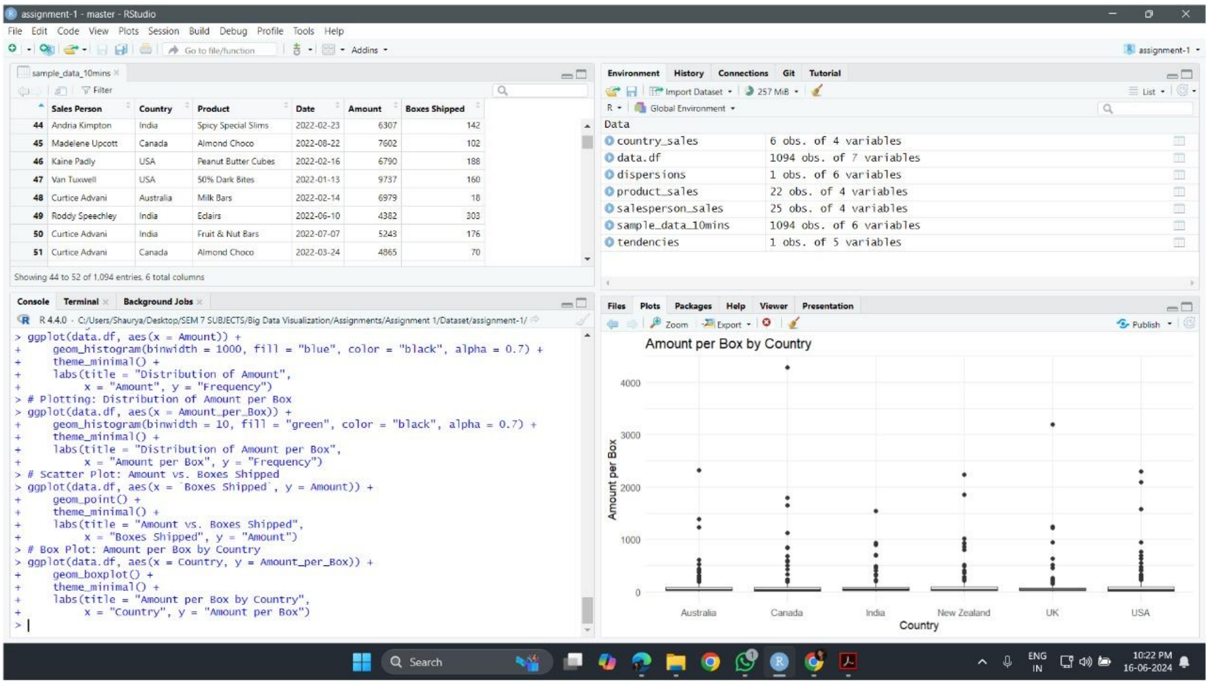
salesperson_sales      25 obs. of 4 variables
sample_data_10mins     1094 obs. of 6 variables
tendencies             1 obs. of 5 variables
```

R 4.4.0 · C:/Users/Shaurya/Desktop/SEM 7 SUBJECTS/Big Data Visualization/Assignments/Assignment 1/Dataset/assignment-1/

```
+     geom_bar(stat = "identity") +
+     theme_minimal() +
+     labs(title = "Salesperson-wise Average Amount per Box",
+          x = "Sales Person", y = "Average Amount per Box")
>
> # Plotting: Distribution of Amount
> ggplot(data.df, aes(x = Amount)) +
+     geom_histogram(binwidth = 1000, fill = "blue", color = "black", alpha = 0.7) +
+     theme_minimal() +
+     labs(title = "Distribution of Amount",
+          x = "Amount", y = "Frequency")
> # Plotting: Distribution of Amount per Box
> ggplot(data.df, aes(x = Amount_per_Box)) +
+     geom_histogram(binwidth = 10, fill = "green", color = "black", alpha = 0.7) +
+     theme_minimal() +
+     labs(title = "Distribution of Amount per Box",
+          x = "Amount per Box", y = "Frequency")
> # Scatter Plot: Amount vs. Boxes Shipped
> ggplot(data.df, aes(x = `Boxes Shipped`, y = Amount)) +
+     geom_point() +
+     theme_minimal() +
+     labs(title = "Amount vs. Boxes Shipped",
+          x = "Boxes Shipped", y = "Amount")
> 
```


assignment-1 - master - RStudio
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Export
Publish
Amount per Box by Country
4000
3000
2000
1000
0
Amount per Box
Australia
Canada
India
New Zealand
UK
USA
Country
Search
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IN
10:22 PM
16-06-2024

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	142
45	Madelene Upcott	Canada	Almond Choco	2022-08-22	7602	102
46	Kaine Padly	USA	Peanut Butter Cubes	2022-02-16	6790	188
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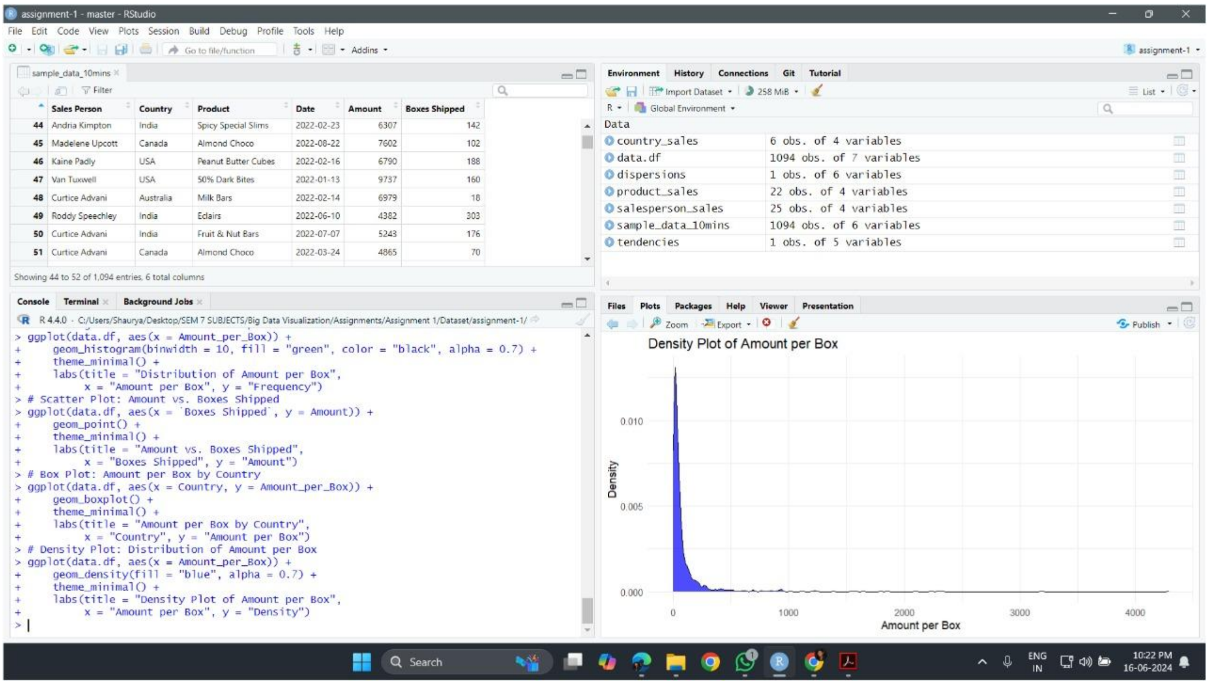
50	Curtice Advani	India	Fruit & Nut Bars	2022-07-07	5243	176
51	Curtice Advani	Canada	Almond Choco	2022-03-24	4865	70

Showing 44 to 52 of 1,094 entries, 6 total columns

```
Data
country_sales          6 obs. of 4 variables
data.df                1094 obs. of 7 variables
dispersions            1 obs. of 6 variables
product_sales          22 obs. of 4 variables
salesperson_sales      25 obs. of 4 variables
sample_data_10mins     1094 obs. of 6 variables
tendencies             1 obs. of 5 variables
```

R 4.4.0 · C:/Users/Shaurya/Desktop/SEM 7 SUBJECTS/Big Data Visualization/Assignments/Assignment 1/Dataset/assignment-1/

```
> ggplot(data.df, aes(x = Amount)) +
+     geom_histogram(binwidth = 1000, fill = "blue", color = "black", alpha = 0.7) +
+     theme_minimal() +
+     labs(title = "Distribution of Amount",
+          x = "Amount", y = "Frequency")
> # Plotting: Distribution of Amount per Box
> ggplot(data.df, aes(x = Amount_per_Box)) +
+     geom_histogram(binwidth = 10, fill = "green", color = "black", alpha = 0.7) +
+     theme_minimal() +
+     labs(title = "Distribution of Amount per Box",
+          x = "Amount per Box", y = "Frequency")
> # Scatter Plot: Amount vs. Boxes Shipped
> ggplot(data.df, aes(x = `Boxes Shipped`, y = Amount)) +
+     geom_point() +
+     theme_minimal() +
+     labs(title = "Amount vs. Boxes Shipped",
+          x = "Boxes Shipped", y = "Amount")
> # Box Plot: Amount per Box by Country
> ggplot(data.df, aes(x = Country, y = Amount_per_Box)) +
+     geom_boxplot() +
+     theme_minimal() +
+     labs(title = "Amount per Box by Country",
+          x = "Country", y = "Amount per Box")
> 
```



assignment-1 - master - RStudio

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	142
45	Madelene Upcott	Canada	Almond Choco	2022-08-22	7602	102
46	Kaine Padly	USA	Peanut Butter Cubes	2022-02-16	6790	188
47	Van Tuxwell	USA	50% Dark Bites	2022-01-13	9737	160
48	Curtice Advani	Australia	Milk Bars	2022-02-14	6979	18
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51	Curtice Advani	Canada	Almond Choco	2022-03-24	4865	70

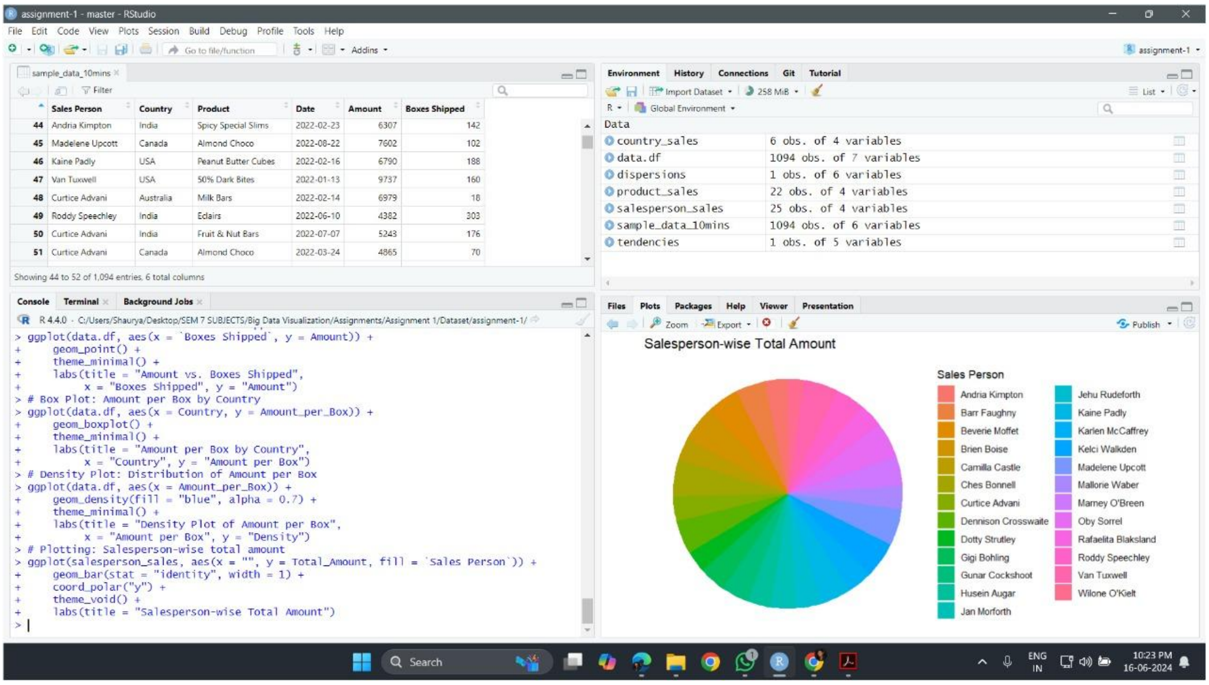
Showing 44 to 52 of 1,094 entries, 6 total columns

R 4.4.0 · C:/Users/Shaurya/Desktop/SEM 7 SUBJECTS/Big Data Visualization/Assignments/Assignment 1/Dataset/assignment-1/

```
> ggplot(data.df, aes(x = Amount_per_Box)) +
+     geom_histogram(binwidth = 10, fill = "green", color = "black", alpha = 0.7) +
+     theme_minimal() +
+     labs(title = "Distribution of Amount per Box",
+          x = "Amount per Box", y = "Frequency")
> # Scatter Plot: Amount vs. Boxes Shipped
> ggplot(data.df, aes(x = `Boxes Shipped`, y = Amount)) +
+     geom_point() +
+     theme_minimal() +
+     labs(title = "Amount vs. Boxes Shipped",
+          x = "Boxes Shipped", y = "Amount")
> # Box Plot: Amount per Box by Country
> ggplot(data.df, aes(x = Country, y = Amount_per_Box)) +
+     geom_boxplot() +
+     theme_minimal() +
+     labs(title = "Amount per Box by Country",
+          x = "Country", y = "Amount per Box")
> # Density Plot: Distribution of Amount per Box
> ggplot(data.df, aes(x = Amount_per_Box)) +
+     geom_density(fill = "blue", alpha = 0.7) +
+     theme_minimal() +
+     labs(title = "Density Plot of Amount per Box",
+          x = "Amount per Box", y = "Density")
> 
```

Data

country_sales	6 obs. of 4 variables
data.df	1094 obs. of 7 variables
dispersions	1 obs. of 6 variables
product_sales	22 obs. of 4 variables
salesperson_sales	25 obs. of 4 variables
sample_data_10mins	1094 obs. of 6 variables
tendencies	1 obs. of 5 variables



assignment-1 - master - RStudio

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
44	Andria Kimpton	India	Spicy Special Slims	2022-02-23	6307	142
45	Madelene Upcott	Canada	Almond Choco	2022-08-22	7602	102
46	Kaine Padly	USA	Peanut Butter Cubes	2022-02-16	6790	188
47	Van Tuxwell	USA	50% Dark Bites	2022-01-13	9737	160
48	Curtice Advani	Australia	Milk Bars	2022-02-14	6979	18
49	Roddy Speechley	India	Eclairs	2022-06-10	4382	303
50	Curtice Advani	India	Fruit & Nut Bars	2022-07-07	5243	176
51	Curtice Advani	Canada	Almond Choco	2022-03-24	4865	70

Showing 44 to 52 of 1,094 entries, 6 total columns

R 4.4.0 · C:/Users/Shaurya/Desktop/SEM 7 SUBJECTS/Big Data Visualization/Assignments/Assignment 1/Dataset/assignment-1/

```
> ggplot(data.df, aes(x = `Boxes Shipped`, y = Amount)) +
+     geom_point() +
+     theme_minimal() +
+     labs(title = "Amount vs. Boxes Shipped",
+          x = "Boxes Shipped", y = "Amount")
> # Box Plot: Amount per Box by Country
> ggplot(data.df, aes(x = Country, y = Amount_per_Box)) +
+     geom_boxplot() +
+     theme_minimal() +
+     labs(title = "Amount per Box by Country",
+          x = "Country", y = "Amount per Box")
> # Density Plot: Distribution of Amount per Box
> ggplot(data.df, aes(x = Amount_per_Box)) +
+     geom_density(fill = "blue", alpha = 0.7) +
+     theme_minimal() +
+     labs(title = "Density Plot of Amount per Box",
+          x = "Amount per Box", y = "Density")
> # Plotting: Salesperson-wise total amount
> ggplot(salesperson_sales, aes(x = "", y = Total_Amount, fill = `Sales Person`)) +
+     geom_bar(stat = "identity", width = 1) +
+     coord_polar("y") +
+     theme_void() +
+     labs(title = "Salesperson-wise Total Amount")
> 
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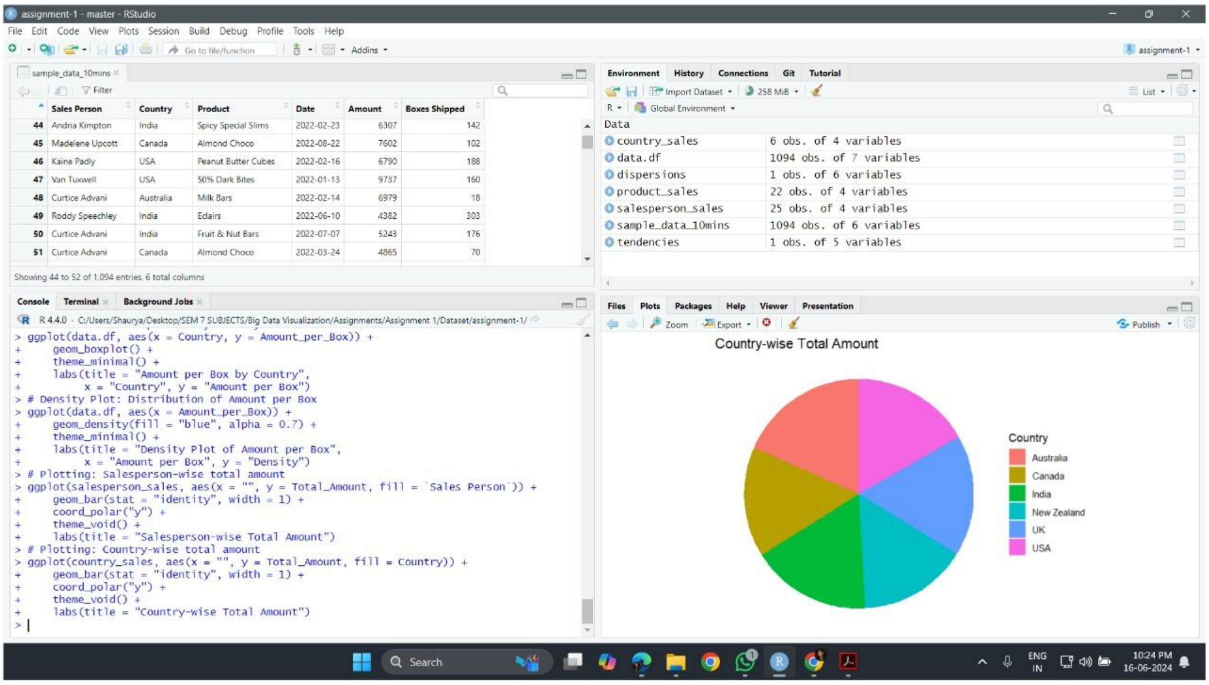
assignment-1 - master - RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
assignment-1
sample_data_10mins
Filter
Environment History Connections Git Tutorial
Import Dataset
258 MiB
List
Global Environment
Console Terminal Background Jobs
Files Plots Packages Help Viewer Presentation
Zoom Export Publish
Country-wise Total Amount
Country
🟥 Australia
🟨 Canada
🟩 India
New Zealand
🟦 UK
🟪 USA
Search
ENG IN
10:24 PM
16-06-2024

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R 4.4.0 · C:/Users/Shaurya/Desktop/SEM 7 SUBJECTS/Big Data Visualization/Assignments/Assignment 1/Dataset/assignment-1/

```
> ggplot(data.df, aes(x = Country, y = Amount_per_Box)) +
+     geom_boxplot() +
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+     labs(title = "Density Plot of Amount per Box",
+          x = "Amount per Box", y = "Density")
> # Plotting: Salesperson-wise total amount
> ggplot(salesperson_sales, aes(x = "", y = Total_Amount, fill = `Sales Person`)) +
+     geom_bar(stat = "identity", width = 1) +
+     coord_polar("y") +
+     theme_void() +
+     labs(title = "Salesperson-wise Total Amount")
> # Plotting: Country-wise total amount
> ggplot(country_sales, aes(x = "", y = Total_Amount, fill = Country)) +
+     geom_bar(stat = "identity", width = 1) +
+     coord_polar("y") +
+     theme_void() +
+     labs(title = "Country-wise Total Amount")
> 
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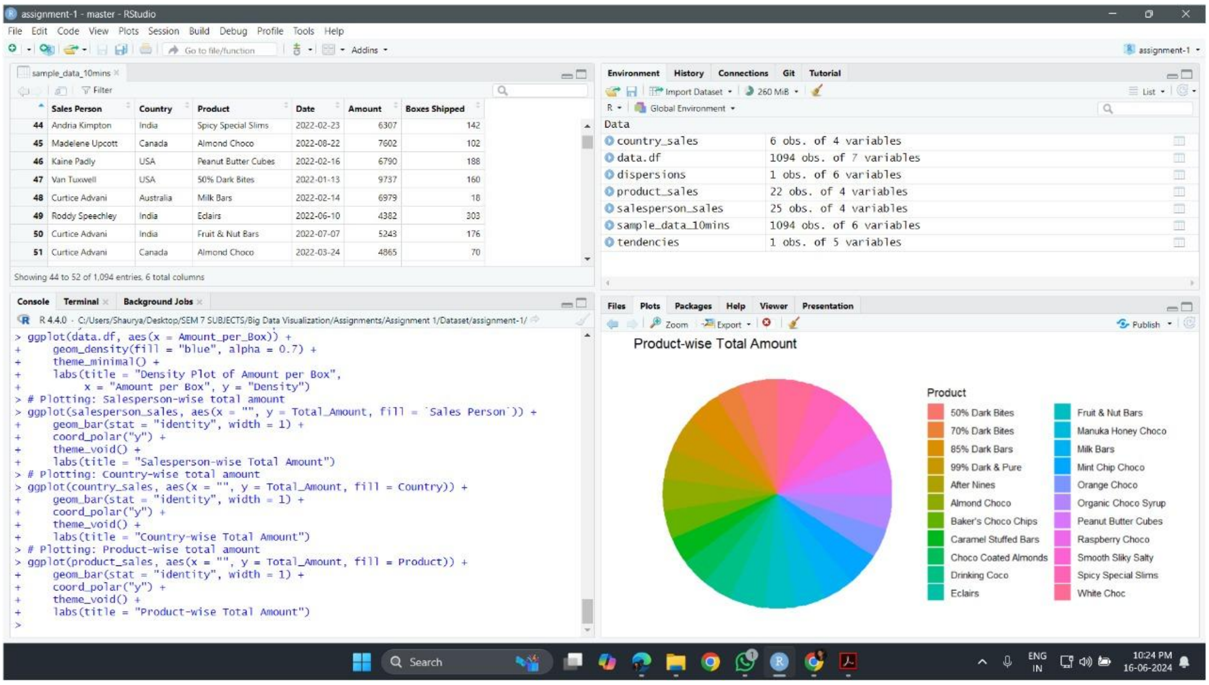

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R 4.4.0 · C:/Users/Shaurya/Desktop/SEM 7 SUBJECTS/Big Data Visualization/Assignments/Assignment 1/Dataset/assignment-1/

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+     coord_polar("y") +
+     theme_void() +
+     labs(title = "Salesperson-wise Total Amount")
> # Plotting: Country-wise total amount
> ggplot(country_sales, aes(x = "", y = Total_Amount, fill = Country)) +
+     geom_bar(stat = "identity", width = 1) +
+     coord_polar("y") +
+     theme_void() +
+     labs(title = "Country-wise Total Amount")
> # Plotting: Product-wise total amount
> ggplot(product_sales, aes(x = "", y = Total_Amount, fill = Product)) +
+     geom_bar(stat = "identity", width = 1) +
+     coord_polar("y") +
+     theme_void() +
+     labs(title = "Product-wise Total Amount")
> 
```