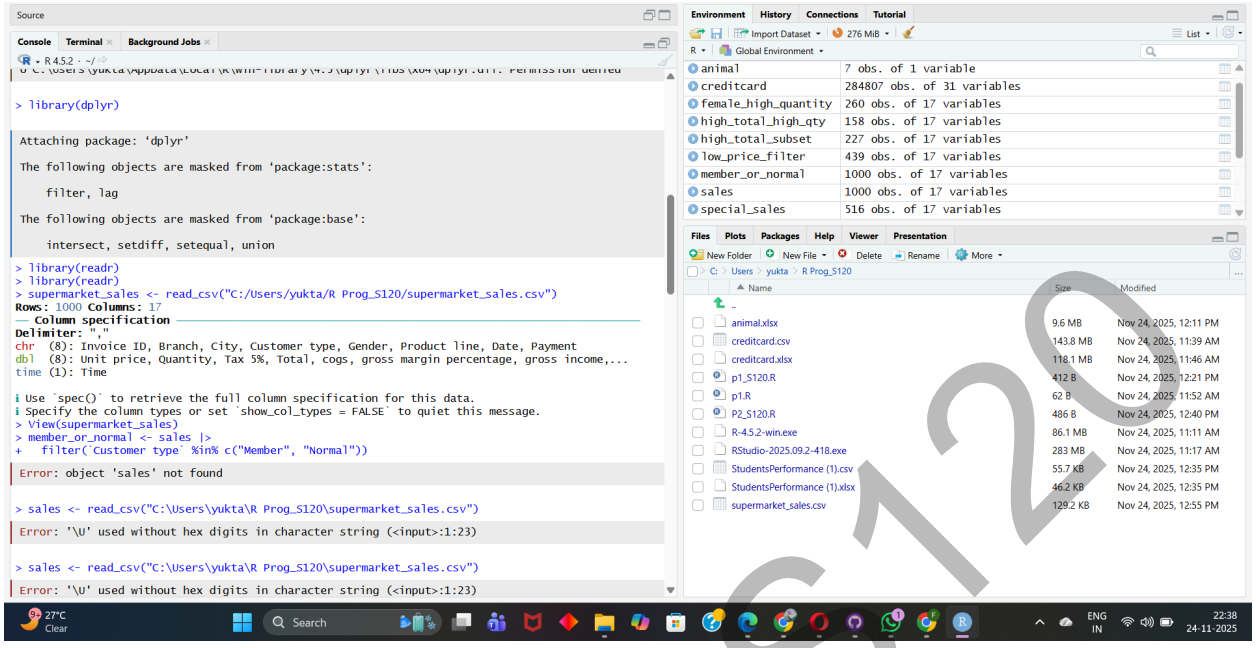
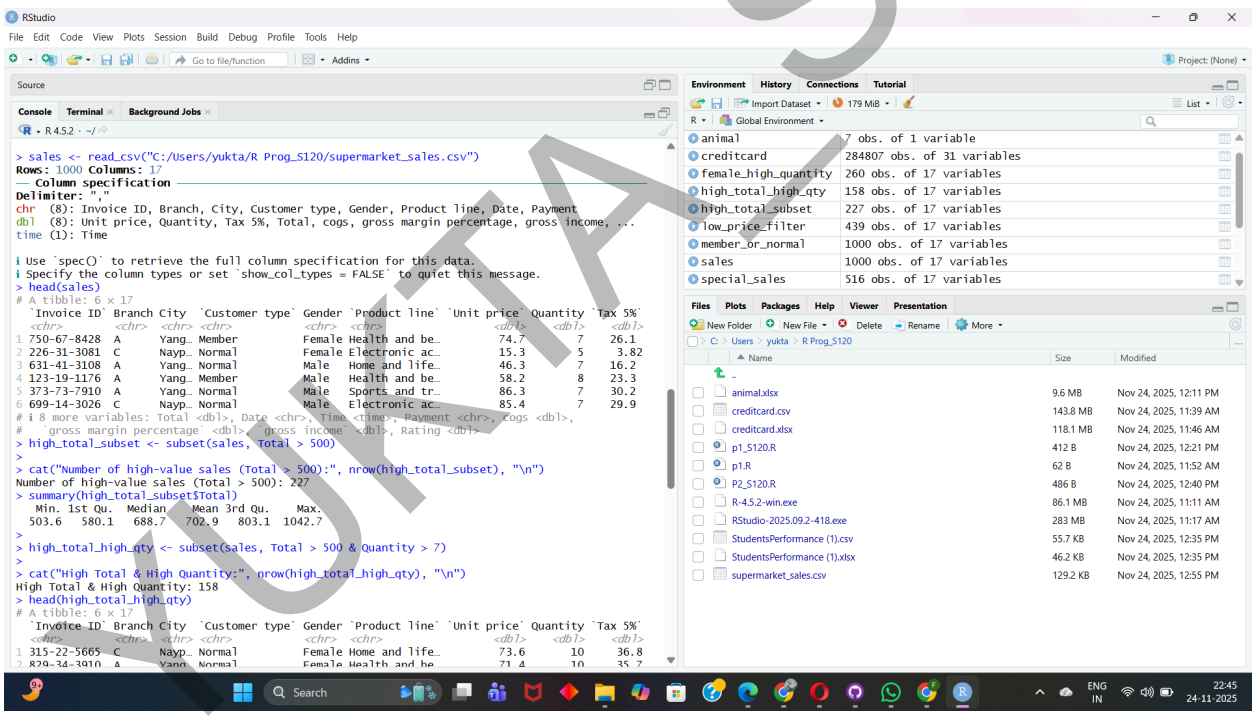
SHETH L.U.J AND SIR M.V COLLEGE

Aim:4 Applying conditional filters subset() or filter() in R.





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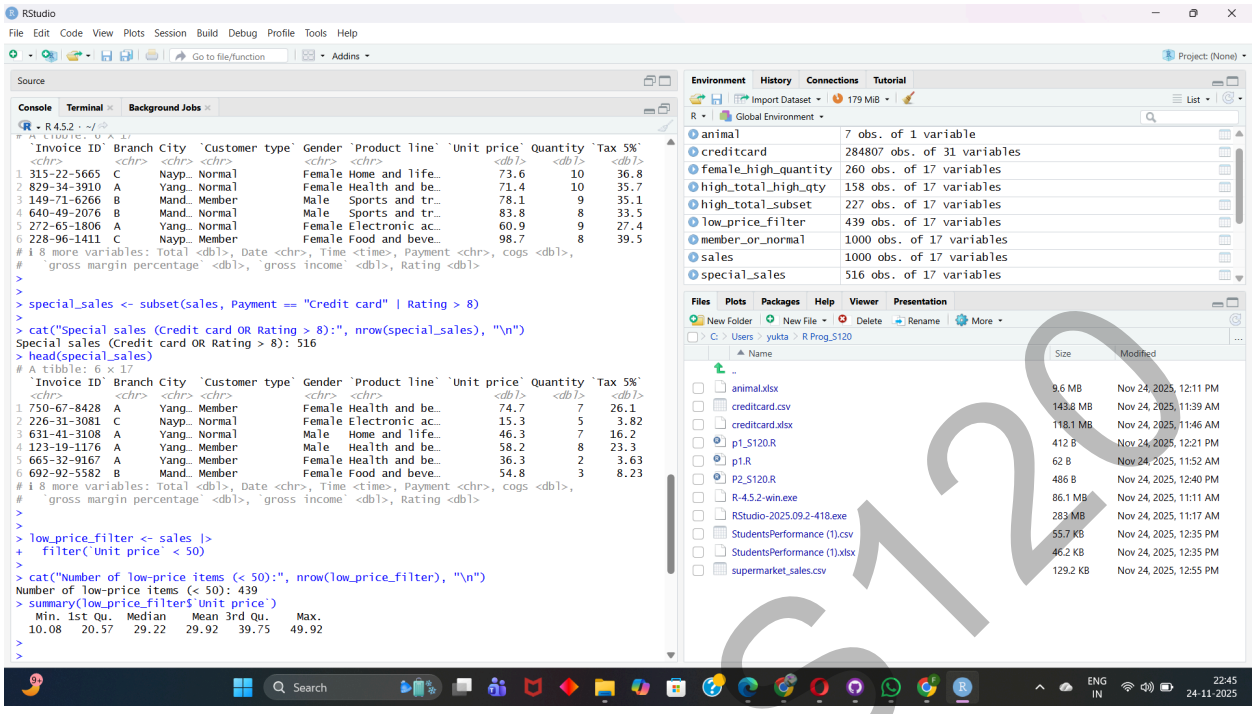
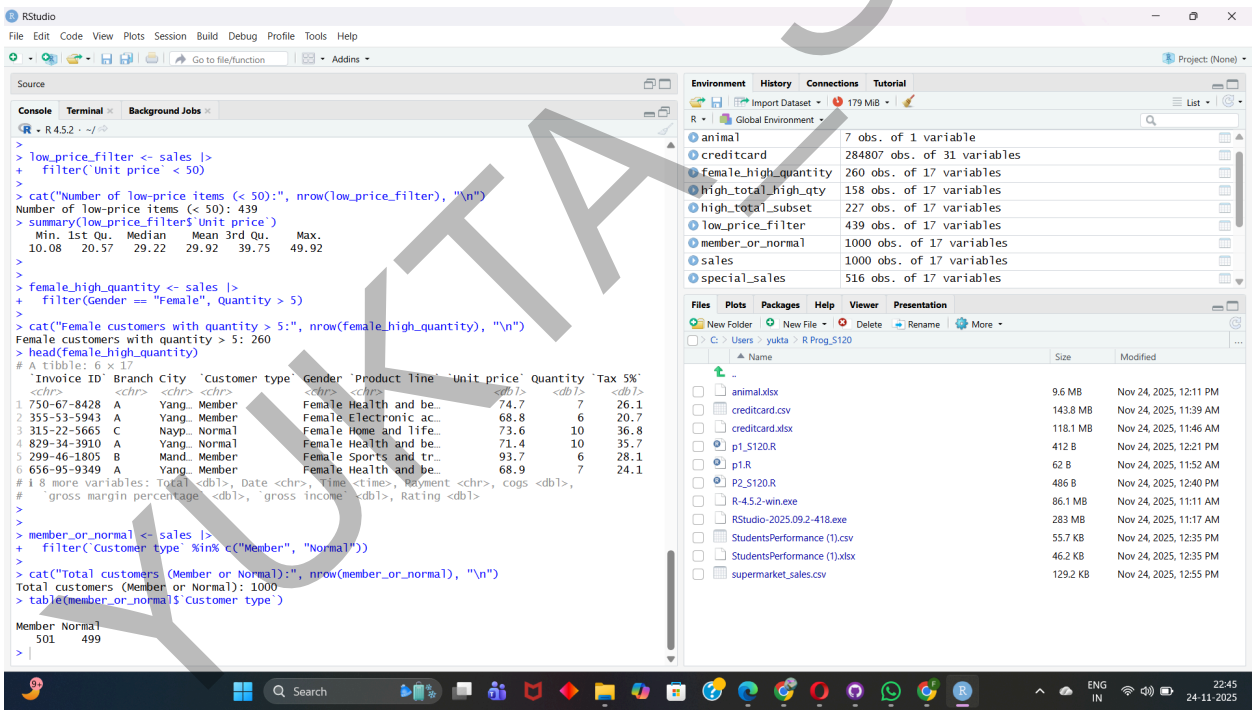


```
special_sales <- subset(sales, Payment == "Credit card" | Rating > 8)

cat("Special sales (Credit card OR Rating > 8):", nrow(special_sales), "\n")
Special sales (Credit card OR Rating > 8): 516
head(special_sales)
# A tibble: 6 × 17
  `Invoice ID` Branch City  `Customer type` Gender `Product line` `Unit price` Quantity `Tax 5%`
  <chr>        <chr>  <chr> <chr>           <chr>  <chr>                <dbl>    <dbl>    <dbl>
1 750-67-8428  A      Yang… Member          Female Health and be…        74.7        7     26.1
2 226-31-3081  C      Nayp… Normal          Female Electronic ac…        15.3        5      3.82
3 631-41-3108  A      Yang… Normal          Male   Home and life…        46.3        7     16.2
4 123-19-1176  A      Yang… Member          Male   Health and be…        58.2        8     23.3
5 665-32-9167  A      Yang… Member          Female Health and be…        36.3        2      3.63
6 692-92-5582  B      Mand… Member          Female Food and beve…        54.8        3      8.23
# i 8 more variables: Total <dbl>, Date <chr>, Time <time>, Payment <chr>, cogs <dbl>,
#   `gross margin percentage` <dbl>, `gross income` <dbl>, Rating <dbl>


low_price_filter <- sales |>
  filter(`Unit price` < 50)

cat("Number of low-price items (< 50):", nrow(low_price_filter), "\n")
Number of low-price items (< 50): 439
summary(low_price_filter$`Unit price`)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
  10.08   20.57   29.22   29.92   39.75   49.92
```



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Number of low-price items (< 50): 439
summary(low_price_filter$`Unit price`)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
  10.08   20.57   29.22   29.92   39.75   49.92


female_high_quantity <- sales |>
  filter(Gender == "Female", Quantity > 5)

cat("Female customers with quantity > 5:", nrow(female_high_quantity), "\n")
Female customers with quantity > 5: 260
head(female_high_quantity)
# A tibble: 6 × 17
  `Invoice ID` Branch City  `Customer type` Gender `Product line` `Unit price` Quantity `Tax 5%`
  <chr>        <chr>  <chr> <chr>           <chr>  <chr>                <dbl>    <dbl>    <dbl>
1 750-67-8428  A      Yang… Member          Female Health and be…        74.7        7     26.1
2 355-53-5943  A      Yang… Member          Female Electronic ac…        68.8        6     20.7
3 315-22-5665  C      Nayp… Normal          Female Home and life…        73.6       10     36.8
4 829-34-3910  A      Yang… Normal          Female Health and be…        71.4       10     35.7
5 299-46-1805  B      Mand… Member          Female Sports and tr…        93.7        6     28.1
6 656-95-9349  A      Yang… Member          Female Health and be…        68.9        7     24.1
# i 8 more variables: Total <dbl>, Date <chr>, Time <time>, Payment <chr>, cogs <dbl>,
#   `gross margin percentage` <dbl>, `gross income` <dbl>, Rating <dbl>


member_or_normal <- sales |>
  filter(`Customer type` %in% c("Member", "Normal"))

cat("Total customers (Member or Normal):", nrow(member_or_normal), "\n")
Total customers (Member or Normal): 1000
table(member_or_normal$`Customer type`)

Member Normal
   501    499
```


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