LData

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```
OpenSooqDF <-read_csv("LadiesData.csv",show_col_types = FALSE)
OpenSooqDF
```

```
## # A tibble: 2,437 x 9
##    city       num_of_rooms num_of_bathrooms furnished     size_in_m2 floor age
##    <chr>      <chr>        <chr>            <chr>              <dbl> <chr> <chr>
##  1 Muscat     Two          Two              Not furnished        130 Grou~ One ~
##  2 Dhofar     Two          Two              Fully furnis~         95 Grou~ One ~
##  3 Muscat     One          Two              Not furnished         75 Thir~ Zero~
##  4 Muscat     Two          Two              Not furnished        100 Sixt~ One ~
##  5 Dhofar     Two          Two              Fully furnis~        600 Base~ Zero~
##  6 Muscat     Two          Three            Not furnished        120 Thir~ Zero~
##  7 Muscat     Two          Two              Not furnished         70 Sixt~ Six ~
##  8 Muscat     Two          Two              Not furnished         70 Seco~ One ~
##  9 Muscat     Two          Two              Fully furnis~        333 Fift~ One ~
## 10 Al Batinah Three        Three            Not furnished        100 Grou~ Six ~
## # i 2,427 more rows
## # i 2 more variables: rental_type <chr>, rental_price <dbl>
```

```
str(OpenSooqDF)
```

```
## spc_tbl_ [2,437 x 9] (S3: spec_tbl_df/tbl_df/tbl/data.frame)
##  $ city            : chr [1:2437] "Muscat" "Dhofar" "Muscat" "Muscat" ...
##  $ num_of_rooms    : chr [1:2437] "Two" "Two" "One" "Two" ...
##  $ num_of_bathrooms: chr [1:2437] "Two" "Two" "Two" "Two" ...
##  $ furnished       : chr [1:2437] "Not furnished" "Fully furnished" "Not furnished" "Not furnished"
##  $ size_in_m2      : num [1:2437] 130 95 75 100 600 120 70 70 333 100 ...
##  $ floor           : chr [1:2437] "Ground floor" "Ground floor" "Third floor" "Sixth floor and up" .
##  $ age             : chr [1:2437] "One to five years" "One to five years" "Zero to eleven months" "O
##  $ rental_type     : chr [1:2437] "Monthly" "Daily" "Yearly" "Yearly" ...
##  $ rental_price    : num [1:2437] 650 18 225 350 20 250 250 185 22 170 ...
##  - attr(*, "spec")=
##   .. cols(
##   ..   city = col_character(),
##   ..   num_of_rooms = col_character(),
##   ..   num_of_bathrooms = col_character(),
##   ..   furnished = col_character(),
##   ..   size_in_m2 = col_double(),
##   ..   floor = col_character(),
##   ..   age = col_character(),
##   ..   rental_type = col_character(),
##   ..   rental_price = col_double()
##   .. )
```

```
##  - attr(*, "problems")=<externalptr>
```

```
head(OpenSooqDF)
```

```
## # A tibble: 6 x 9
##   city   num_of_rooms num_of_bathrooms furnished       size_in_m2 floor    age
##   <chr>  <chr>        <chr>            <chr>                <dbl> <chr>    <chr>
## 1 Muscat Two          Two              Not furnished          130 Ground ~ One ~
## 2 Dhofar Two          Two              Fully furnished         95 Ground ~ One ~
## 3 Muscat One          Two              Not furnished           75 Third f~ Zero~
## 4 Muscat Two          Two              Not furnished          100 Sixth f~ One ~
## 5 Dhofar Two          Two              Fully furnished        600 Basemen~ Zero~
## 6 Muscat Two          Three            Not furnished          120 Third f~ Zero~
## # i 2 more variables: rental_type <chr>, rental_price <dbl>
```

```
OpenSooqDF %>%
  select(city, size_in_m2, rental_price)
```

```
## # A tibble: 2,437 x 3
##    city       size_in_m2 rental_price
##    <chr>           <dbl>        <dbl>
##  1 Muscat            130          650
##  2 Dhofar             95           18
##  3 Muscat             75          225
##  4 Muscat            100          350
##  5 Dhofar            600           20
##  6 Muscat            120          250
##  7 Muscat             70          250
##  8 Muscat             70          185
##  9 Muscat            333           22
## 10 Al Batinah        100          170
## # i 2,427 more rows
```

```
## `summarise()` has grouped output by 'city'. You can override using the
## `.groups` argument.
```

```
## # A tibble: 25 x 6
## # Groups:   city [8]
##    city          rental_type average_rent min_rent max_ren count
##    <chr>         <chr>              <dbl>    <dbl>   <dbl> <int>
##  1 Ad Dakhiliyah Daily               32.9       15     120    14
##  2 Ad Dakhiliyah Monthly            124         70     230    35
##  3 Ad Dakhiliyah Yearly             112.        50     160     9
##  4 Ad Dhahirah   Daily               15         15      15     1
##  5 Ad Dhahirah   Monthly            106         50     150    20
##  6 Ad Dhahirah   Yearly             100        100     100     2
##  7 Al Batinah    Daily               27.8       10     200    13
##  8 Al Batinah    Monthly            127.        20     450   140
##  9 Al Batinah    Yearly             122.        10     210    43
## 10 Al Buraimi    Monthly             75.8       50     150    12
## # i 15 more rows
```

```
OpenSooqDF %>%
  group_by(city,rental_type) %>%
  summarise(
    average_rent = mean(rental_price, na.rm = TRUE),
    min_rent = min(rental_price, na.rm = TRUE),
```

```
    max_ren = max(rental_price, na.rm = TRUE),
    count = n()
  )
```

```
## `summarise()` has grouped output by 'city'. You can override using the
## `.groups` argument.
```

```
## # A tibble: 25 x 6
## # Groups:   city [8]
##    city          rental_type average_rent min_rent max_ren count
##    <chr>         <chr>              <dbl>    <dbl>   <dbl> <int>
##  1 Ad Dakhiliyah Daily               32.9       15     120    14
##  2 Ad Dakhiliyah Monthly            124         70     230    35
##  3 Ad Dakhiliyah Yearly             112.        50     160     9
##  4 Ad Dhahirah   Daily               15         15      15     1
##  5 Ad Dhahirah   Monthly            106         50     150    20
##  6 Ad Dhahirah   Yearly             100        100     100     2
##  7 Al Batinah    Daily               27.8       10     200    13
##  8 Al Batinah    Monthly            127.        20     450   140
##  9 Al Batinah    Yearly             122.        10     210    43
## 10 Al Buraimi    Monthly             75.8       50     150    12
## # i 15 more rows
```

```
muscatData <- OpenSooqDF %>%
  filter(city == "Muscat",
         num_of_rooms == "Two" ,
         rental_price <200, na.rm = TRUE)
muscatData
```

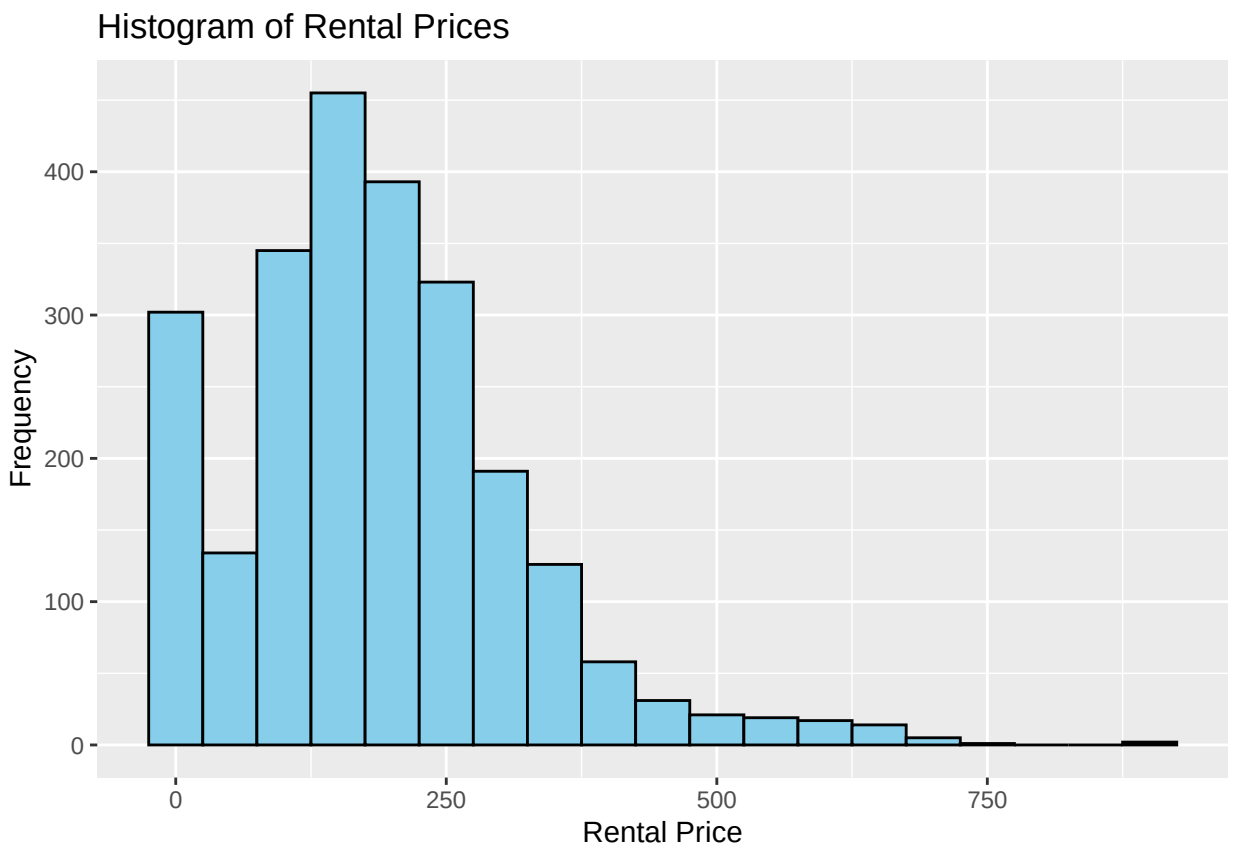
```
## # A tibble: 271 x 9
##    city   num_of_rooms num_of_bathrooms furnished       size_in_m2 floor   age
##    <chr>  <chr>        <chr>            <chr>                <dbl> <chr>   <chr>
##  1 Muscat Two          Two              Not furnished           70 Second~ One ~
##  2 Muscat Two          Two              Fully furnished        333 Fifth ~ One ~
##  3 Muscat Two          Three            Fully furnished        100 Second~ Zero~
##  4 Muscat Two          Three            Fully furnished        100 Third ~ One ~
##  5 Muscat Two          Three            Fully furnished        110 Second~ One ~
##  6 Muscat Two          Two              Fully furnished        100 Fifth ~ One ~
##  7 Muscat Two          Two              Fully furnished         92 Fourth~ One ~
##  8 Muscat Two          Two              Fully furnished        100 First ~ One ~
##  9 Muscat Two          Three            Fully furnished        112 Fifth ~ One ~
## 10 Muscat Two          Two              Fully furnished        500 Third ~ One ~
## # i 261 more rows
## # i 2 more variables: rental_type <chr>, rental_price <dbl>
```

```
OpenSooqDF %>%
  mutate(price_per_m2 <-
           rental_price/size_in_m2)
```

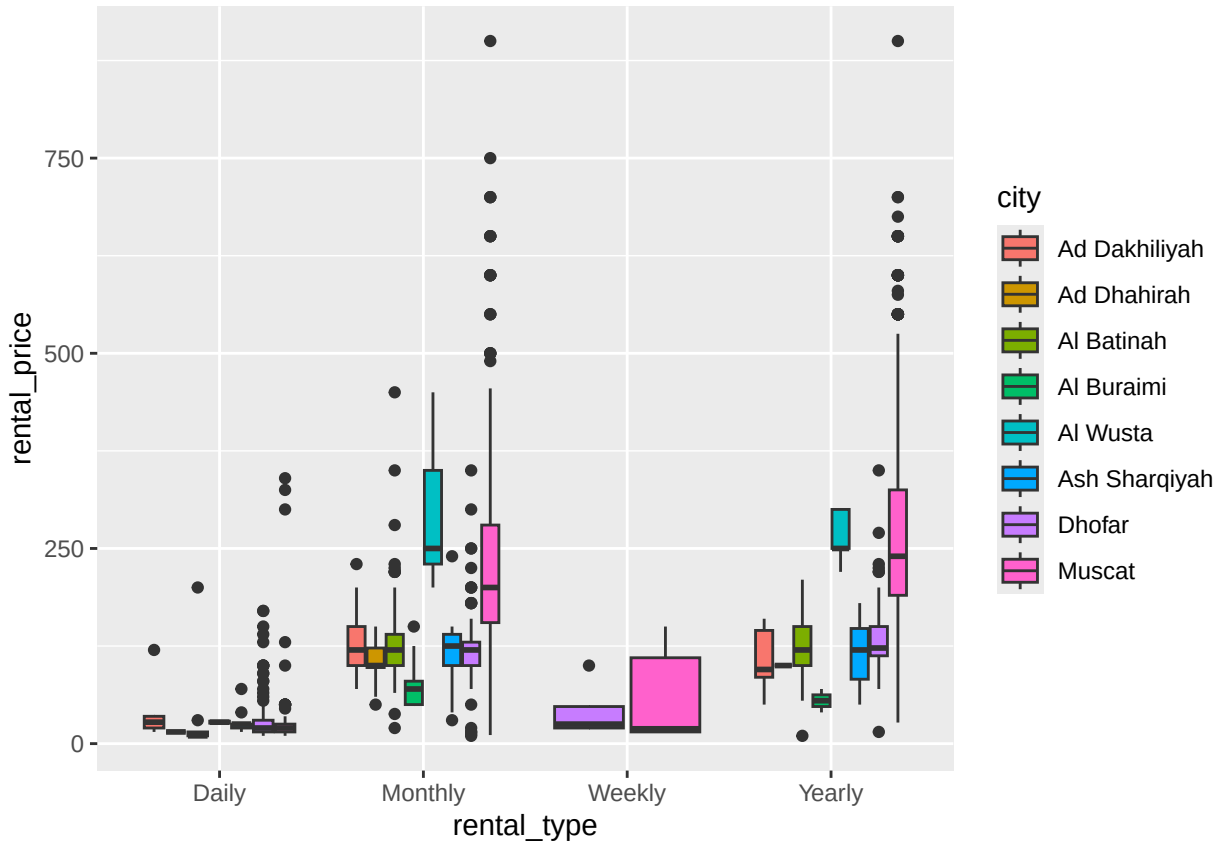
```
## # A tibble: 2,437 x 10
##    city       num_of_rooms num_of_bathrooms furnished     size_in_m2 floor age
##    <chr>      <chr>        <chr>            <chr>              <dbl> <chr> <chr>
##  1 Muscat     Two          Two              Not furnished        130 Grou~ One ~
##  2 Dhofar     Two          Two              Fully furnis~         95 Grou~ One ~
##  3 Muscat     One          Two              Not furnished         75 Thir~ Zero~
##  4 Muscat     Two          Two              Not furnished        100 Sixt~ One ~
```

```
##  5 Dhofar     Two          Two              Fully furnis~        600 Base~ Zero~
##  6 Muscat     Two          Three            Not furnished        120 Thir~ Zero~
##  7 Muscat     Two          Two              Not furnished         70 Sixt~ Six ~
##  8 Muscat     Two          Two              Not furnished         70 Seco~ One ~
##  9 Muscat     Two          Two              Fully furnis~        333 Fift~ One ~
## 10 Al Batinah Three        Three            Not furnished        100 Grou~ Six ~
## # i 2,427 more rows
## # i 3 more variables: rental_type <chr>, rental_price <dbl>,
## #   `price_per_m2 <- rental_price/size_in_m2` <dbl>
```

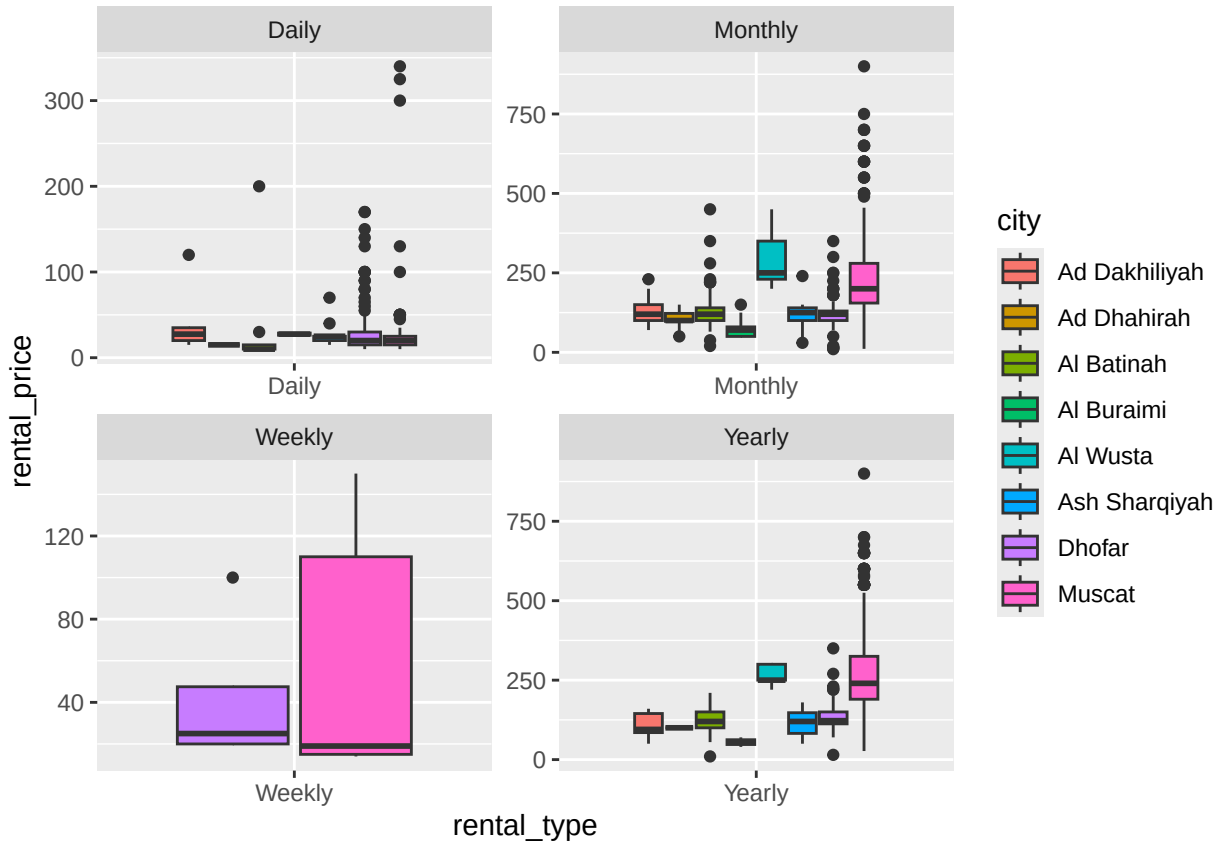
```r
# Read the CSV file
OpenSooqDF <- read_csv("LadiesData.csv", show_col_types = FALSE)

# Plot histogram of rental_price
ggplot(OpenSooqDF, aes(x = rental_price)) +
  geom_histogram(binwidth = 50, fill = "skyblue", color = "black") +
  labs(title = "Histogram of Rental Prices",
       x = "Rental Price",
       y = "Frequency")
```



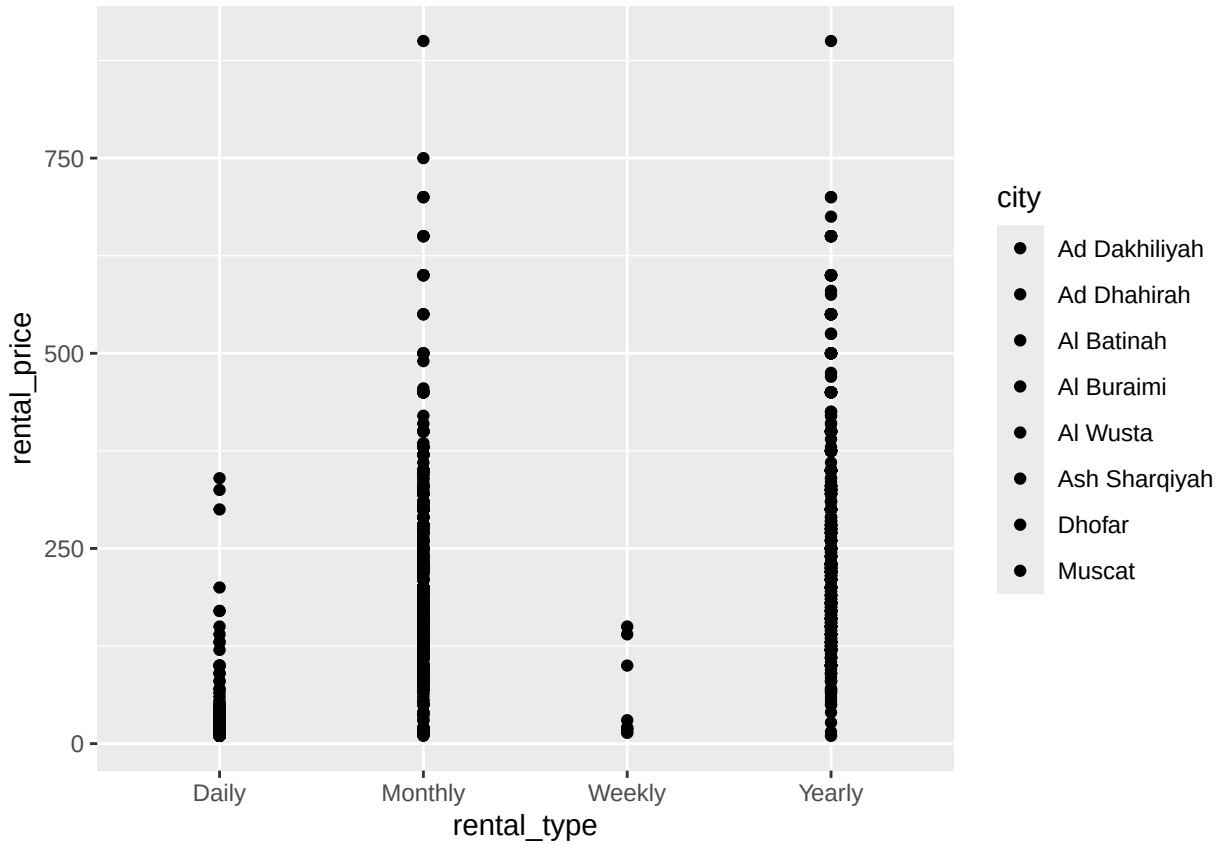

```r
ggplot(OpenSooqDF, aes (x = rental_type, y = rental_price, fill = city)) + geom_boxplot()
```




```
ggplot(OpenSooqDF, aes (x = rental_type, y = rental_price, fill = city)) + geom_boxplot() + facet_wrap(
```

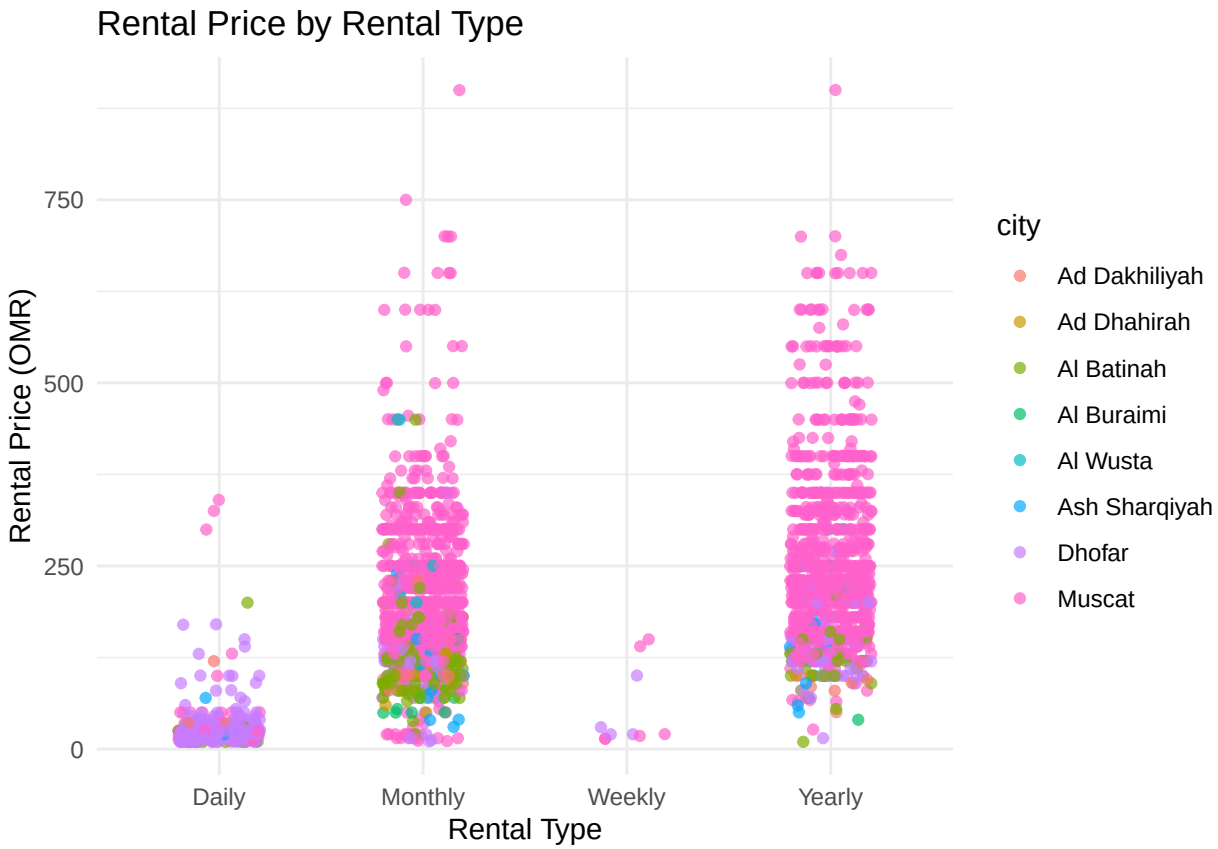



```
ggplot(OpenSooqDF, aes (x = rental_type, y = rental_price, fill = city)) + geom_point()
```

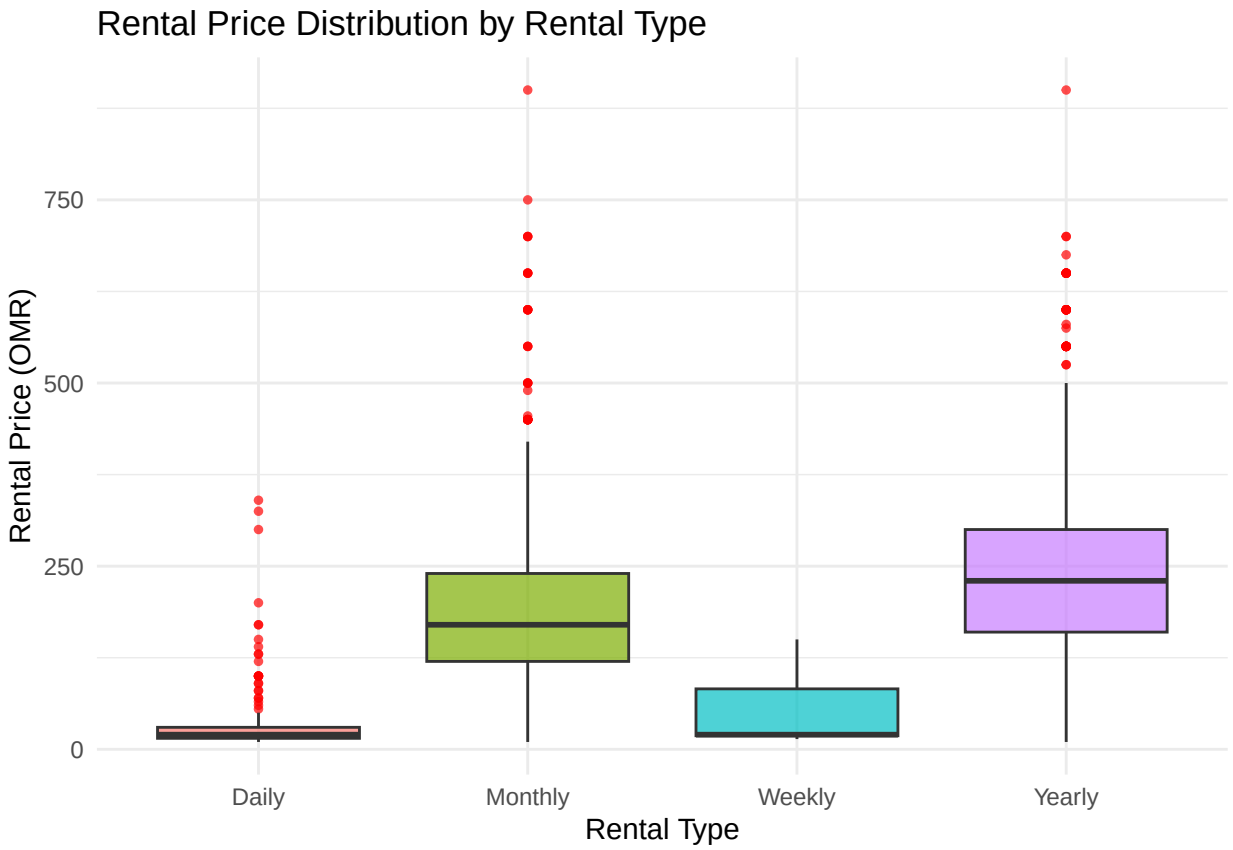



```r
ggplot(OpenSooqDF, aes(x = rental_type, y = rental_price, color = city)) +
  geom_point(size = 3, alpha = 0.7) +
  theme_minimal() +
  labs(title = "Rental Prices by Type and City",
       x = "Rental Type",
       y = "Rental Price")
```

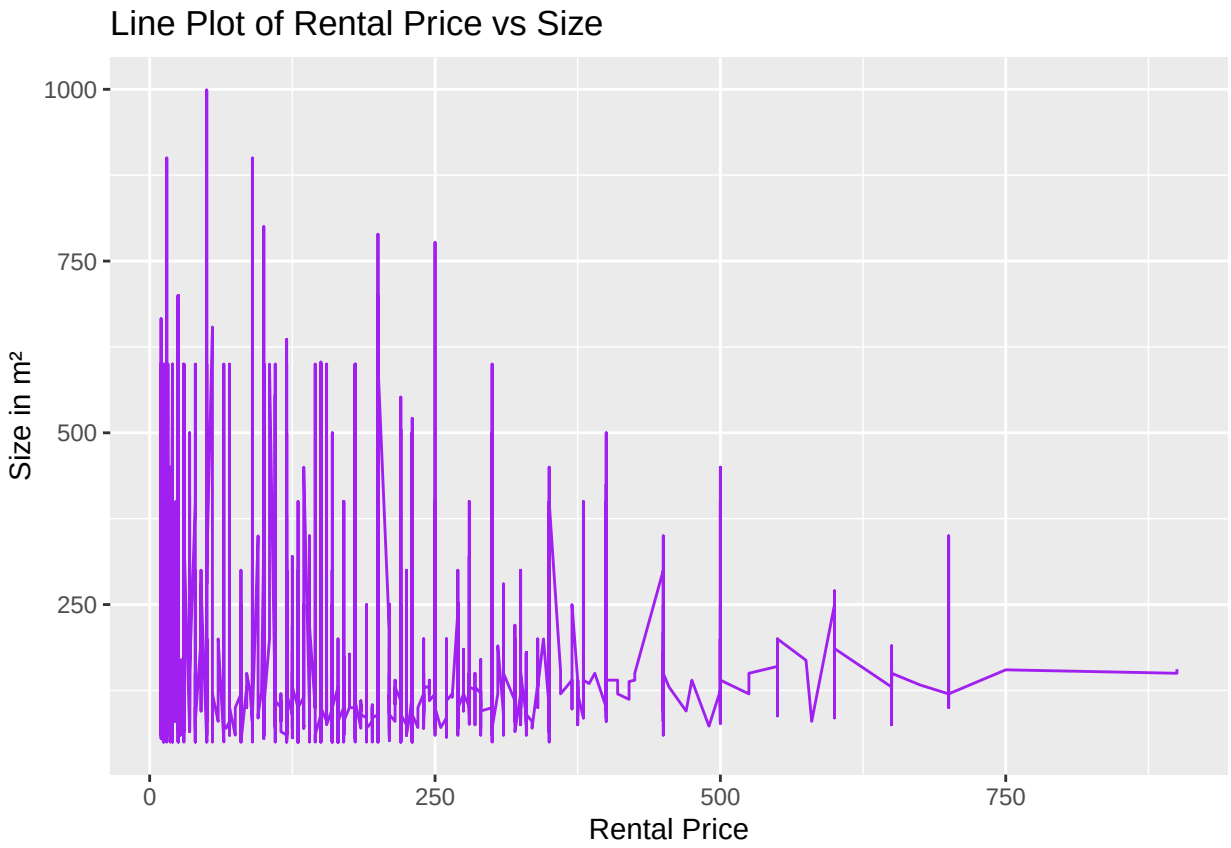

```
ggplot(OpenSooqDF, aes(x = rental_type, y = rental_price, color = city)) +
  geom_jitter(width = 0.2, alpha = 0.7) +
  labs(title = "Rental Price by Rental Type",
       x = "Rental Type",
       y = "Rental Price (OMR)") +
  theme_minimal()
```




```
ggplot(OpenSooqDF, aes(x = rental_type, y = rental_price, fill = rental_type)) +
  geom_boxplot(alpha = 0.7, outlier.color = "red", outlier.size = 1) +
  labs(title = "Rental Price Distribution by Rental Type",
       x = "Rental Type",
       y = "Rental Price (OMR)") +
  theme_minimal() +
  theme(legend.position = "none")
```




```r
ggplot(OpenSooqDF, aes(x = rental_price, y = size_in_m2)) +
  geom_line(color = "purple") +
  labs(title = "Line Plot of Rental Price vs Size",
       x = "Rental Price",
       y = "Size in m²")
```


Line Plot of Rental Price vs Size
Size in m²
1000
750
500
250
0
250
500
750
Rental Price