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

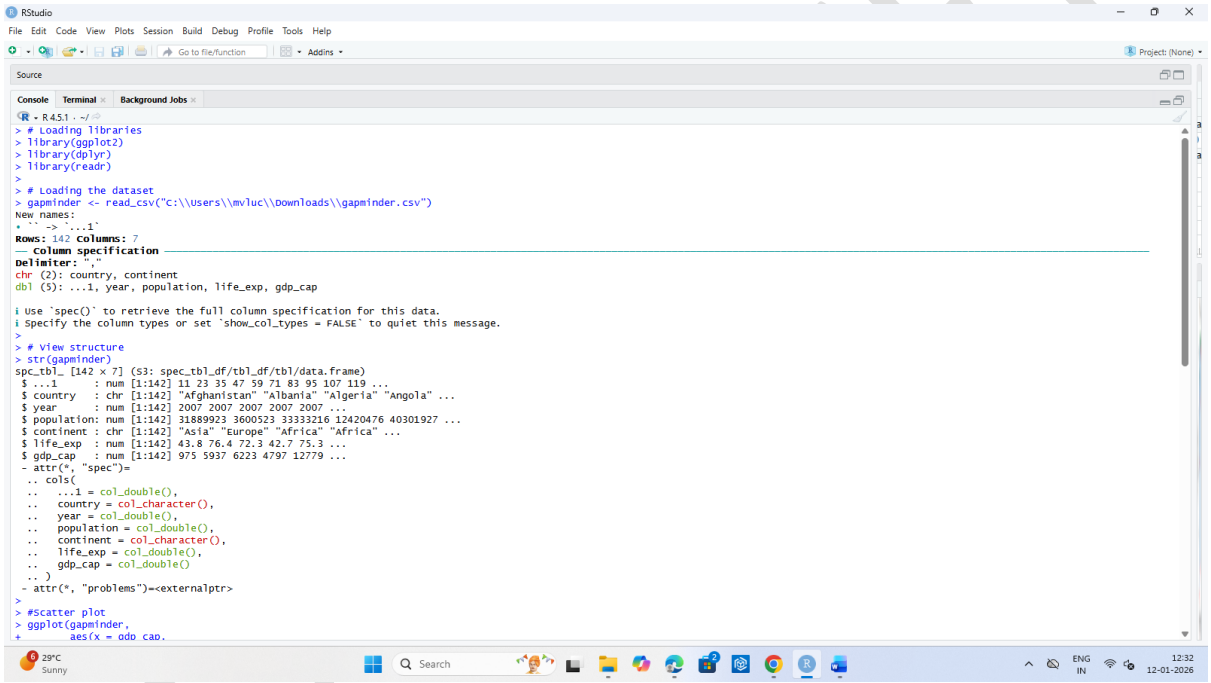
SUBJECT :- DATA ANALYSIS WITH SAS/SPSS/R

PRACTICAL – 10

AIM:- Creating graphical reports using ,ggplot2 (R).

- Scatter plot
- Pie chart
- High-Low chart

Output:-



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S124

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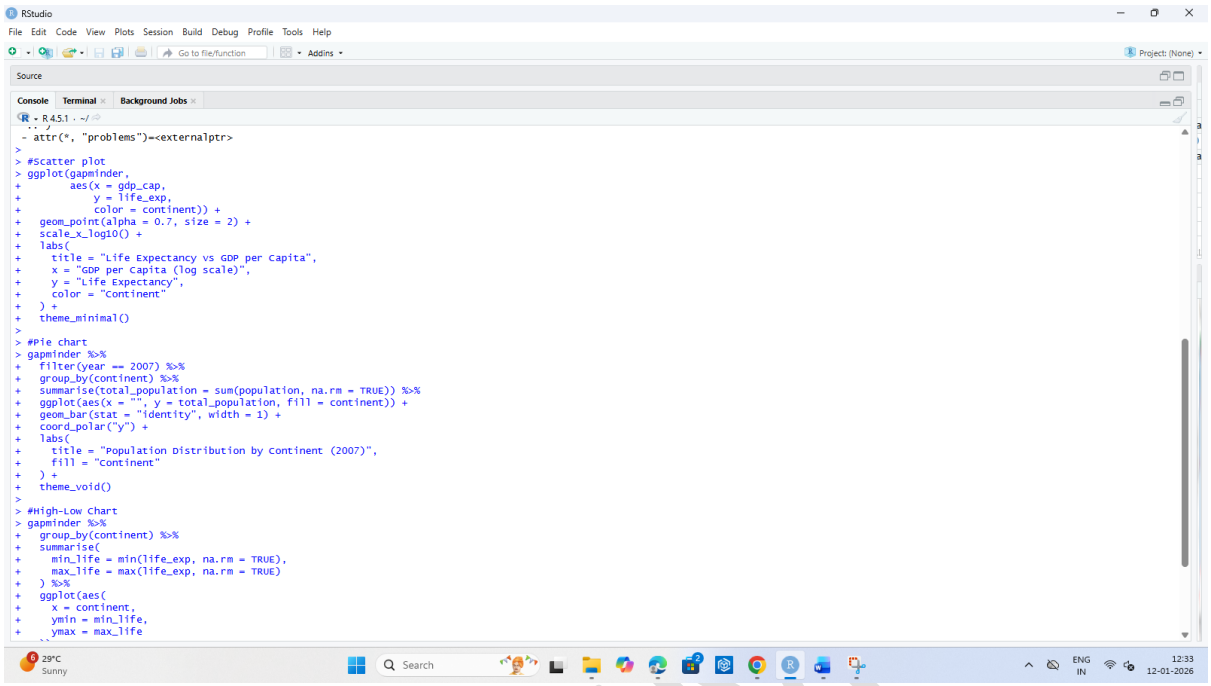
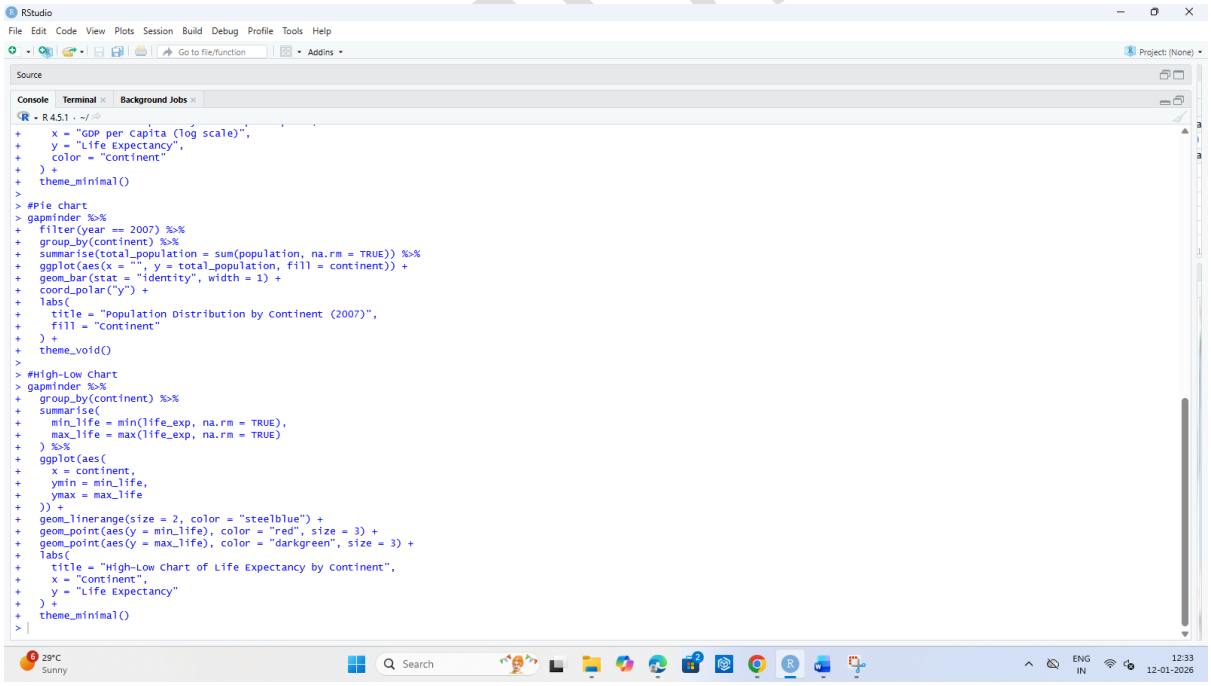


```
 - attr(*, "problems")=<externalptr>
> 
> #Scatter plot
> ggplot(gapminder,
+        aes(x = gdp_cap,
+            y = life_exp,
+            color = continent)) +
+   geom_point(alpha = 0.7, size = 2) +
+   scale_x_log10() +
+   labs(
+     title = "Life Expectancy vs GDP per Capita",
+     x = "GDP per Capita (log scale)",
+     y = "Life Expectancy",
+     color = "Continent"
+   ) +
+   theme_minimal()
> 
> #Pie chart
> gapminder %>%
+   filter(year == 2007) %>%
+   group_by(continent) %>%
+   summarise(total_population = sum(population, na.rm = TRUE)) %>%
+   ggplot(aes(x = "", y = total_population, fill = continent)) +
+   geom_bar(stat = "identity", width = 1) +
+   coord_polar("y") +
+   labs(
+     title = "Population Distribution by Continent (2007)",
+     fill = "Continent"
+   ) +
+   theme_void()
> 
> #High-Low Chart
> gapminder %>%
+   group_by(continent) %>%
+   summarise(
+     min_life = min(life_exp, na.rm = TRUE),
+     max_life = max(life_exp, na.rm = TRUE)
+   ) %>%
+   ggplot(aes(
+     x = continent,
+     ymin = min_life,
+     ymax = max_life
```



```
+     x = "GDP per Capita (log scale)",
+     y = "Life Expectancy",
+     color = "Continent"
+   ) +
+   theme_minimal()
> 
> #Pie chart
> gapminder %>%
+   filter(year == 2007) %>%
+   group_by(continent) %>%
+   summarise(total_population = sum(population, na.rm = TRUE)) %>%
+   ggplot(aes(x = "", y = total_population, fill = continent)) +
+   geom_bar(stat = "identity", width = 1) +
+   coord_polar("y") +
+   labs(
+     title = "Population Distribution by Continent (2007)",
+     fill = "Continent"
+   ) +
+   theme_void()
> 
> #High-Low Chart
> gapminder %>%
+   group_by(continent) %>%
+   summarise(
+     min_life = min(life_exp, na.rm = TRUE),
+     max_life = max(life_exp, na.rm = TRUE)
+   ) %>%
+   ggplot(aes(
+     x = continent,
+     ymin = min_life,
+     ymax = max_life
+   )) +
+   geom_linerange(size = 2, color = "steelblue") +
+   geom_point(aes(y = min_life), color = "red", size = 3) +
+   geom_point(aes(y = max_life), color = "darkgreen", size = 3) +
+   labs(
+     title = "High-Low Chart of Life Expectancy by Continent",
+     x = "Continent",
+     y = "Life Expectancy"
+   ) +
+   theme_minimal()
> 
```

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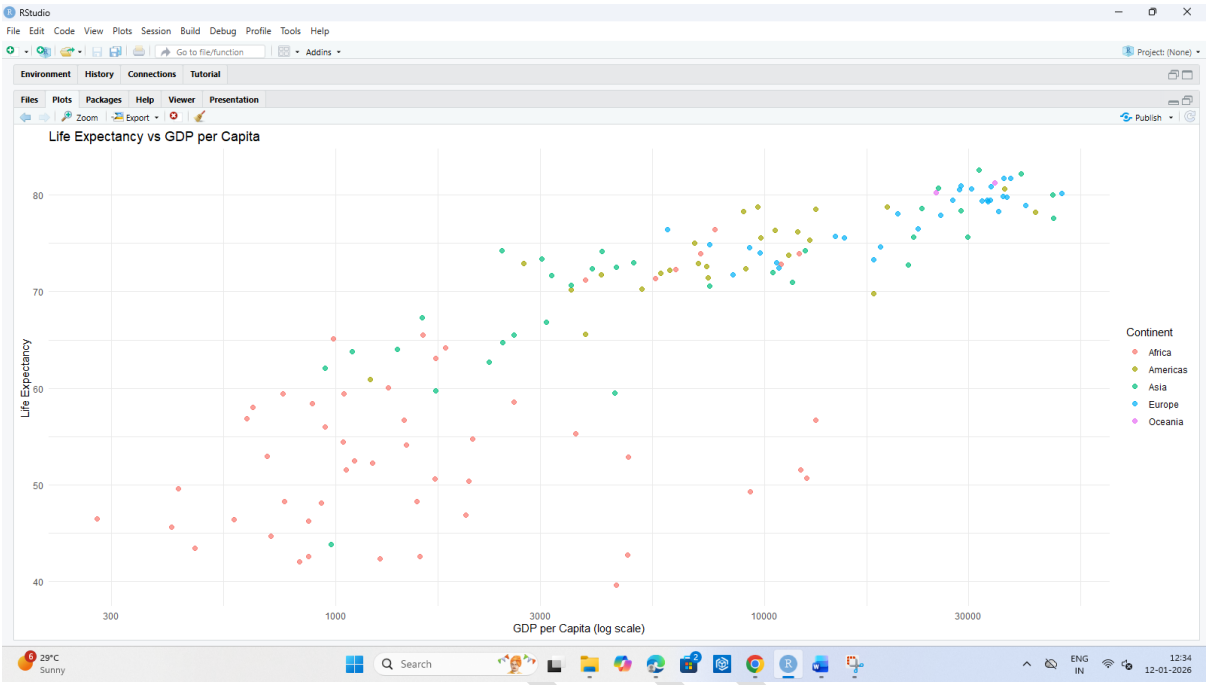
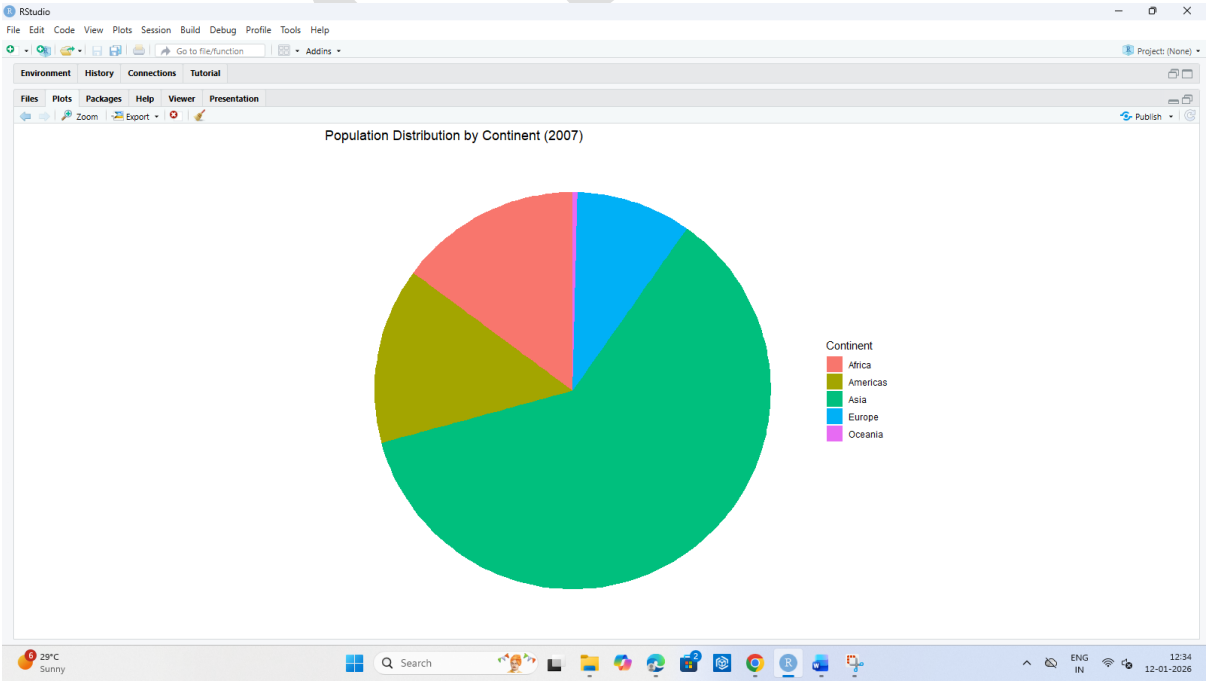
#Scatter Plot



#PieChart



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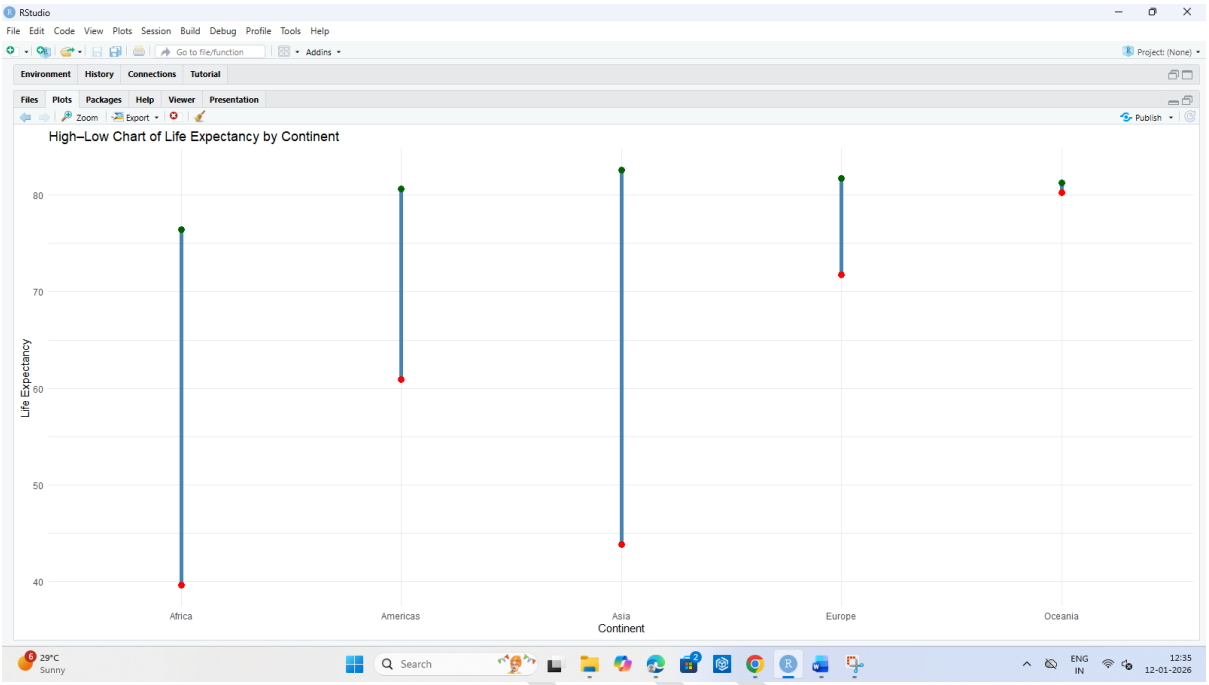
#High-Low Chart



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