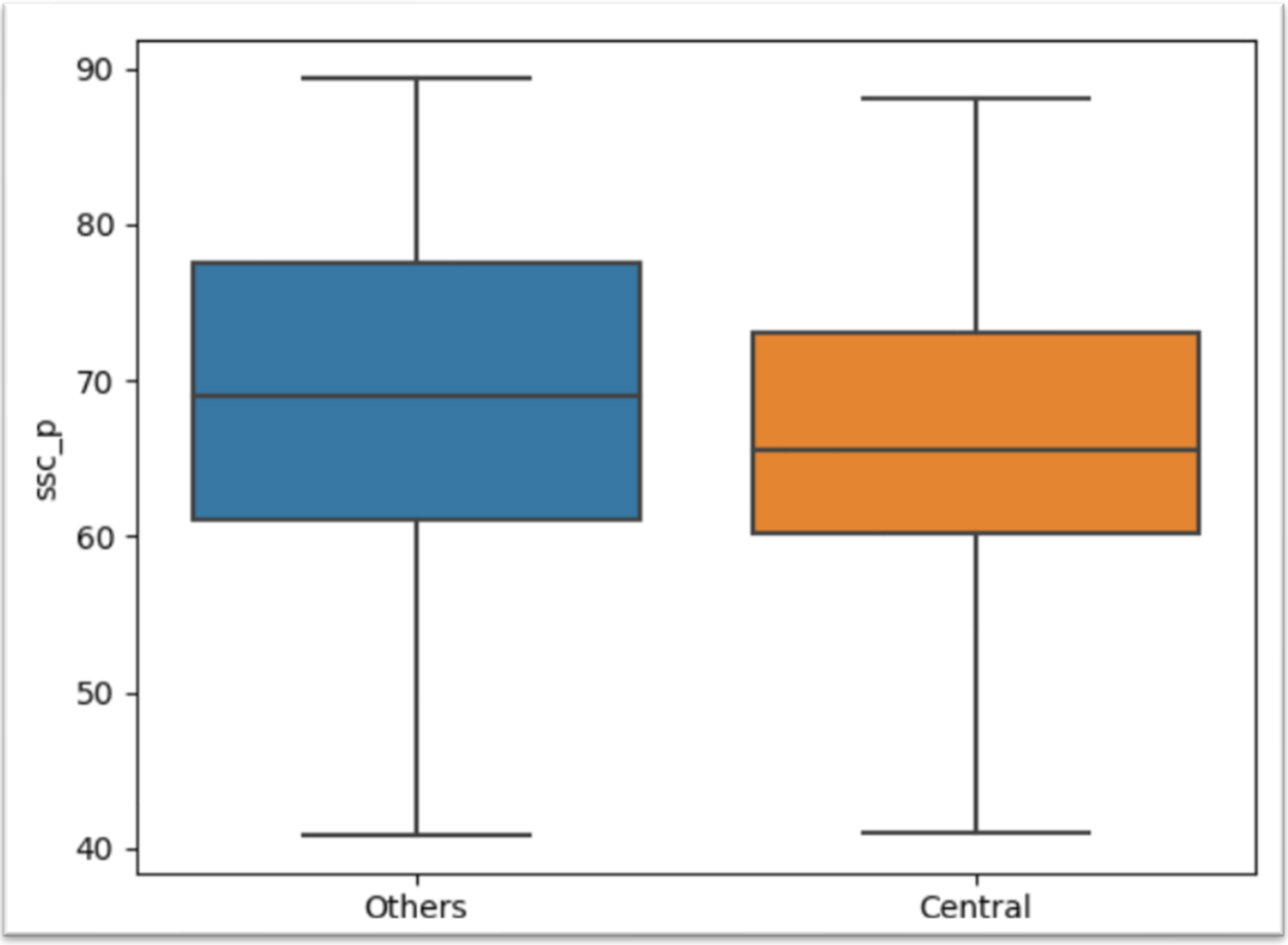
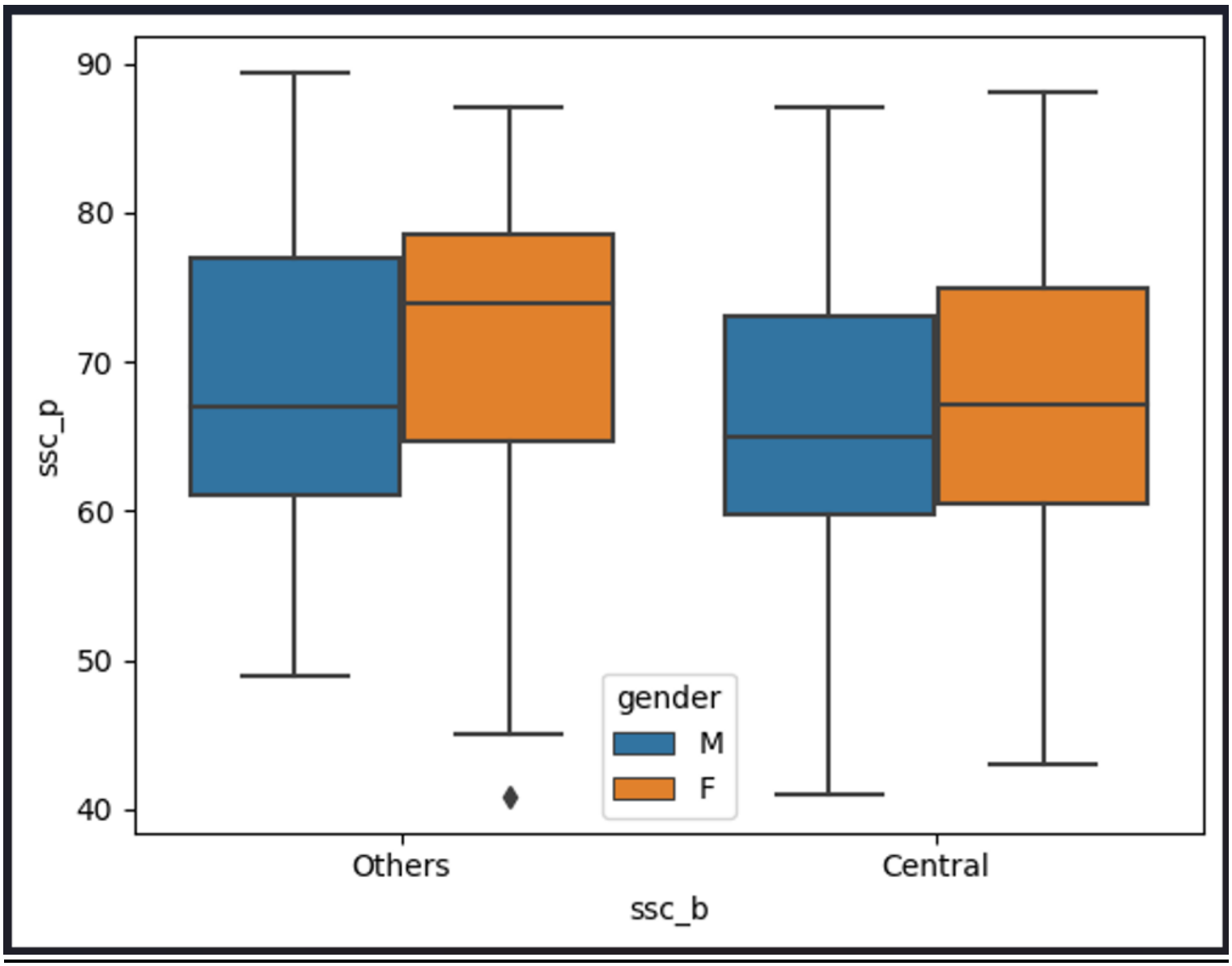
Seaborn Plot Details

Box Plot :

- X-axis = Categorical Data (Single Group) -> (Hue Removed Here)
- Y-axis = Numerical Data



- X-axis = Categorical Data (Two Groups) -> (Hue Not Removed)
- Y-axis = Numerical Data



- Box Plot Represents the Concepts of Percentile (Q1, Q2, Q3 and Q4)
- First Line of Box Plot Represents - Q1
- Second Line of Box Plot Represents - Q2
- Third Line of Box Plot Represents - Q3 -> (Broader Line = Median Value)
- Fourth Line of Box Plot Represents - Q4

By Considering the above Points, We can say that

<u>Category – Others :</u>

1. **<u>Students – Male :</u>**

- The Initial Value (Q1) of Students - Male starts Nearly 48 (Rounded Off To 50 for Rough Understanding)

- The (Q2) of Students - Male starts Nearly 62 (Rounded Off To 65 for Rough Understanding)
- The (Q3) of Students - Male starts Nearly 67 (Rounded Off To 70 for Rough Understanding)
- The (Q4) of Students - Male starts Nearly 78 (Rounded Off To 80 for Rough Understanding)

2. <u>Students – Female :</u>

- The Initial Value (Q1) of Students - Female starts Nearly 35
- The (Q2) of Students - Female starts Nearly 65
- The (Q3) of Students - Female starts Nearly 73 (Rounded Off To 75 for Rough Understanding)
- The (Q4) of Students - Female starts Nearly 79 (Rounded Off To 80 for Rough Understanding)

<u>Category – Central :</u>

3. <u>Students – Male :</u>

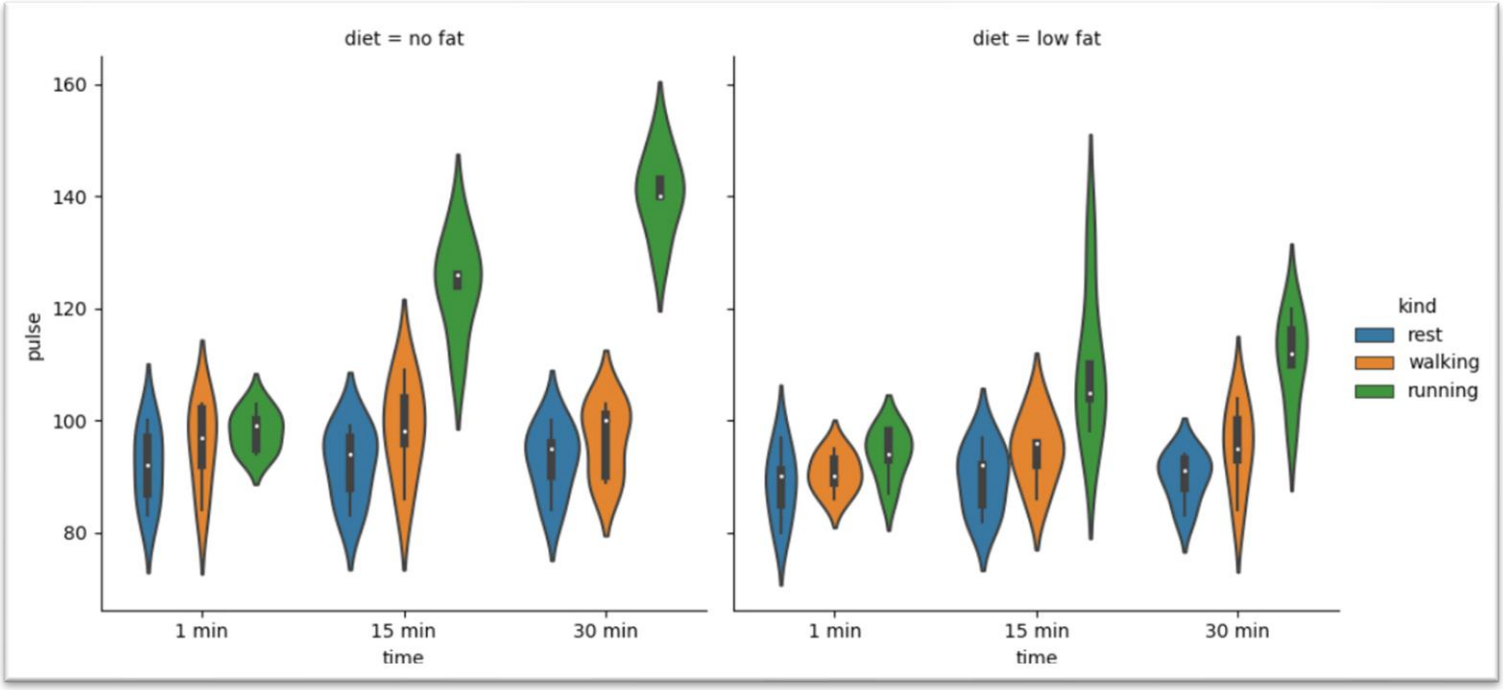
- The Initial Value (Q1) of Students - Male starts Nearly 44 (Rounded Off To 45 for Rough Understanding)
- The (Q2) of Students - Male starts Nearly 60
- The (Q3) of Students - Male starts Nearly 65
- The (Q4) of Students - Male starts Nearly 72 (Rounded Off To 75 for Rough Understanding)

4. <u>Students – Female :</u>

- The Initial Value (Q1) of Students - Female starts Nearly 35
- The (Q2) of Students - Female starts Nearly 62 (Rounded Off To 65 for Rough Understanding)

- The (Q3) of Students - Female starts Nearly 68 (Rounded Off To 70 for Rough Understanding)
- The (Q4) of Students - Female starts Nearly 73 (Rounded Off To 75 for Rough Understanding)

Cat Plot (Previously Known as Factor Plot) :



- Cat Plot shows the Distribution of Dataset Passed (Used an Inbuild Dataset - exercise from Library – seaborn) and this Dataset talks about the Exercise activities of People those performed the Exercises
- Parameter of this Plot is (x = "time", y = "pulse", hue = "kind", kind = 'violin', col = "diet", data = df)
- This Plot Groups the Data by Time Taken (In Mins) for Specified activities (Rest, Walking and Running) in X-Axis and Pulse rate in Y-Axis
- The Activities has been differentiated through Colours Rest = Blue, Walking = Orange and Running = Green
- Overall Graphs has been plotted into Two Types of Diet : 1. No Fat and 2. Low Fat

Type – 01 : Diet = No Fat -> 01 Min

- **Activity-01 : Rest,** shows that Pulse Rate Ranges between 75 To 110 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 85 To 105 Beats / Per Minute
- **Activity-02 : Walking,** shows that Pulse Rate Ranges between 75 To 115 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 90 To 110 Beats / Per Minute
- **Activity-03 : Running,** shows that Pulse Rate Ranges between 90 To 105 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 95 To 105 Beats / Per Minute

Type – 01 : Diet = No Fat -> 15 Mins

- **Activity-01 : Rest,** shows that Pulse Rate Ranges between 75 To 105 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 85 To 100 Beats / Per Minute
- **Activity-02 : Walking,** shows that Pulse Rate Ranges between 75 To 120 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 90 To 115 Beats / Per Minute
- **Activity-03 : Running,** shows that Pulse Rate Ranges between 100 To 145 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 110 To 130 Beats / Per Minute

Type – 01 : Diet = No Fat -> 30 Mins

- **Activity-01 : Rest,** shows that Pulse Rate Ranges between 78 To 108 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 85 To 105 Beats / Per Minute
- **Activity-02 : Walking,** shows that Pulse Rate Ranges between 80 To 110 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 85 To 105 Beats / Per Minute
- **Activity-03 : Running,** shows that Pulse Rate Ranges between 120 To 155 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 130 To 150 Beats / Per Minute

Type – 02 : Diet = Low Fat -> 01 Min

- **Activity-01 : Rest,** shows that Pulse Rate Ranges between 60 To 105 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 70 To 90 Beats / Per Minute
- **Activity-02 : Walking,** shows that Pulse Rate Ranges between 80 To 95 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 90 To 110 Beats / Per Minute
- **Activity-03 : Running,** shows that Pulse Rate Ranges between 78 To 103 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 90 To 100 Beats / Per Minute

Type – 02 : Diet = Low Fat -> 15 Mins

- **Activity-01 : Rest,** shows that Pulse Rate Ranges between 70 To 103 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 75 To 95 Beats / Per Minute
- **Activity-02 : Walking,** shows that Pulse Rate Ranges between 78 To 110 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 85 To 105 Beats / Per Minute
- **Activity-03 : Running,** shows that Pulse Rate Ranges between 80 To 150 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 90 To 120 Beats / Per Minute

Type – 02 : Diet = Low Fat -> 30 Mins

- **Activity-01 : Rest,** shows that Pulse Rate Ranges between 75 To 95 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 80 To 98 Beats / Per Minute
- **Activity-02 : Walking,** shows that Pulse Rate Ranges between 70 To 110 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 80 To 105 Beats / Per Minute
- **Activity-03 : Running,** shows that Pulse Rate Ranges between 90 To 130 Beats / Per Minute and a Broadened Distribution for Dense Data Ranges between 100 To 125 Beats / Per Minute