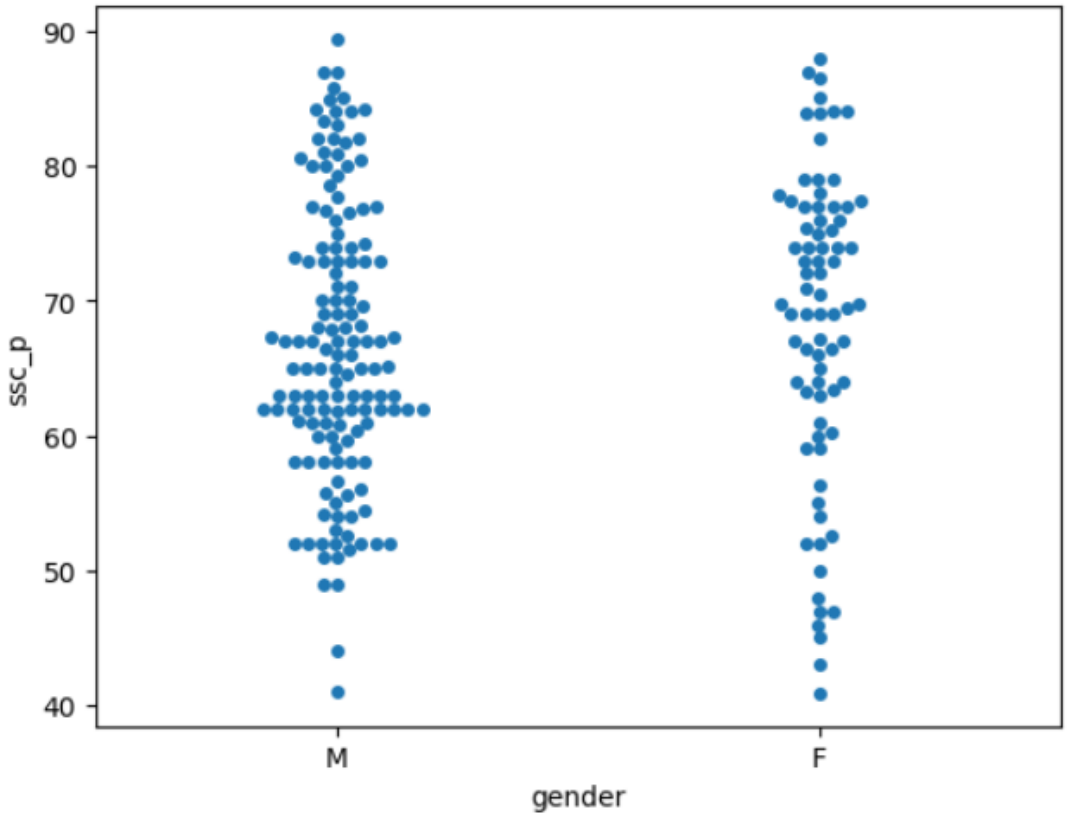
Swarm Plot

A swarmplot is a type of categorical scatter plot used to visualize the distribution of data points in a dataset.

It shows **all individual values**, spread out to **avoid overlap**, so you can **see the actual distribution** of each category.

Unlike stripplot(), swarmplot() ensures that points are adjusted along the categorical axis so that they do not overlap, giving a better sense of the density of points.



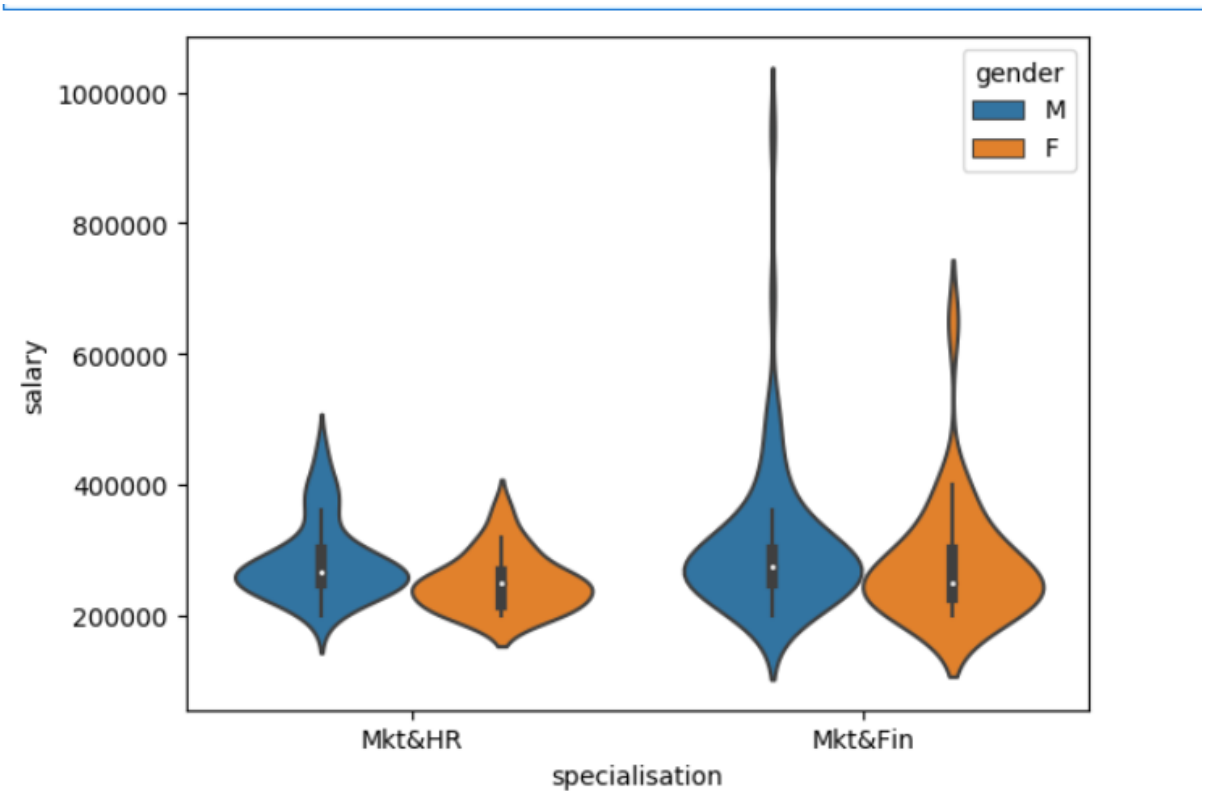
Observations

1. We have a swarmplot of Male and Female category in ssc_p where both male and female students got marks from 40 to 90.
2. Very few students in male than female got marks below 50
3. Also in Male many points are distributed in 50-75 which means many students in Male got marks 60-75.
4. Both genders scored till 90 , only few in female than male scored 80-90

ViolinPlot

A **violin plot** is a combination of **boxplot + distribution plot** .
It shows **Summary statistics** and **Distribution shape**

A violin plot depicts distributions of numeric data for one or more groups using density curves. The width of each curve corresponds with the approximate frequency of data points in each region.



Observations:

1. We have a violin plot for specialization column and salary.
2. It shows the density of students salary by Marketing&HR and Marketing&Finance on gender basis.
3. Entire Mkt&Hr students salaries range between 2-5L.
4. But in Mkt&Fin students salaries ranges from 2-10L.
5. Compared to Mkt&Hr, Mkt&Fin salaries are high. Few students received above 500000 salary.
6. Mkt&Hr – Majority of the students salaries ranges between 2-3L.
7. Mkt&Hr – Very few Male students salries ranges till 5L But For female students the highest salary offered is 4L.
8. Mkt&Fin - Very few Male students salries ranges till 10L But For female students the highest salary offered is 7L.
9. Salaries of Students from Mkt&Fin specialization has wider range than Mkt&Hr.
10. Compared to Female students , male students salaries has wider range.