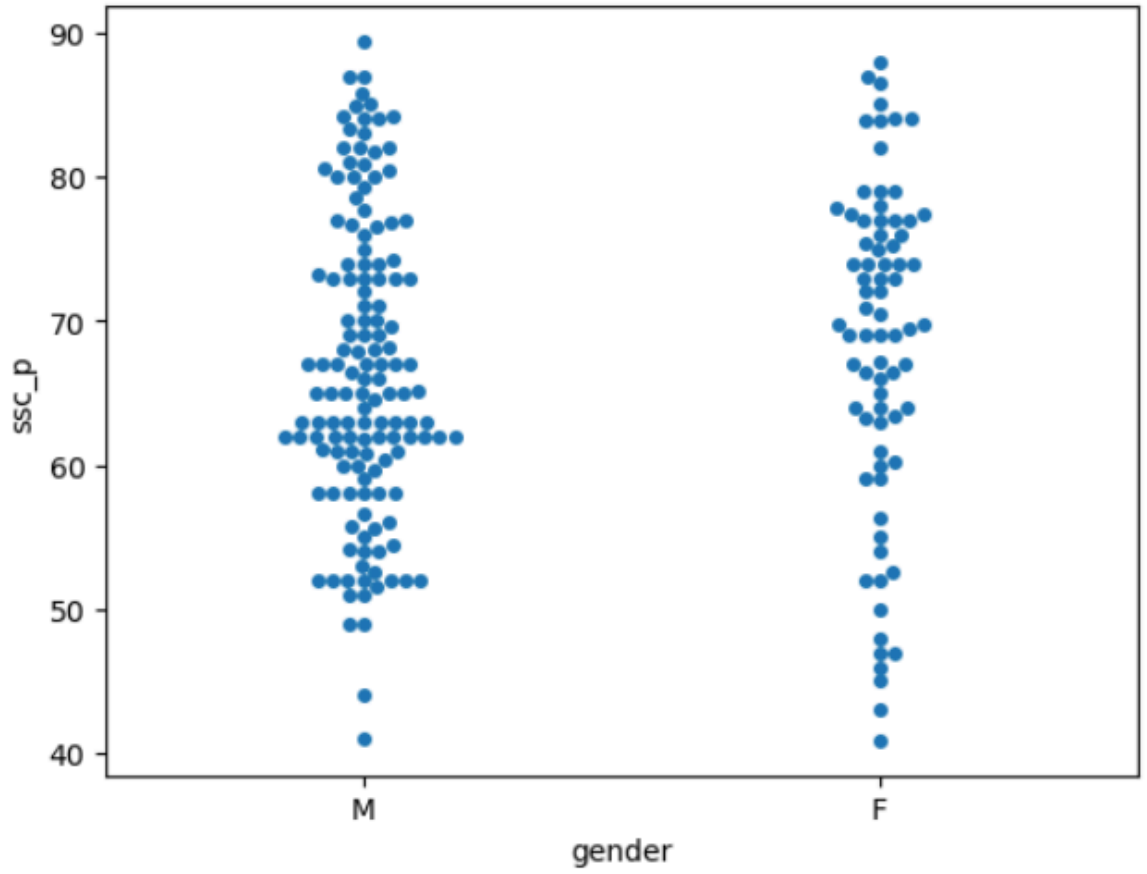
📊 Swarmplot:

```
sns.swarmplot(x='gender',y='ssc_p',data=dataset)
plt.show()
```



🔍 What the Swarmplot Shows:

- **Each dot** represents an individual student's `ssc_p` score.
- **X-axis**: Gender (`M` or `F`)
- **Y-axis**: `ssc_p` (Secondary school percentage)

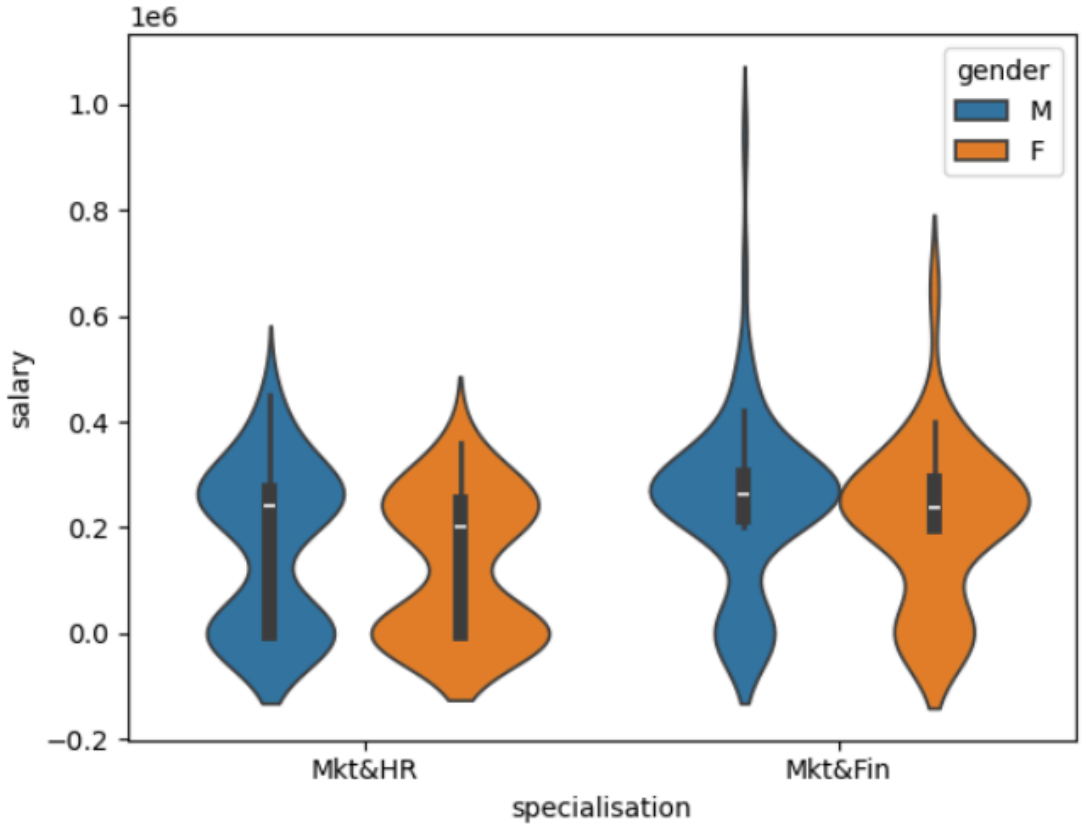
- The dots are **evenly spread** to avoid overlap (which is the key feature of a swarmplot).
- **Both genders** have a wide range of scores, approximately from **40% to 90%**.
- The plot shows that:
    - Males have many scores clustered around the **60-70%** range.
    - Females show a slightly **higher concentration around the 70-80%** range.

✅ Insights:

- There is **no extreme skew** in either gender's distribution.
- **Outliers** (if any) are visible as isolated dots.
- This is a **useful plot for identifying clusters, patterns, and density** in a small to medium-sized dataset.

Violin Plot:

```
sns.violinplot(x='specialisation',y='salary',hue='gender',data=dataset)
plt.show()
```



📊 Plot Type: Violin Plot

This violin plot displays the **distribution of salaries** based on:

- **Specialisation** (`Mkt HR` and `Mkt Fin`)
- **Gender** (`M` and `F` – shown using `hue='gender'`)

🔍 What each part means:

- **X-axis** → `specialisation`:
  - `Mkt HR`: Marketing and Human Resources
  - `Mkt Fin`: Marketing and Finance

- **Y-axis** → `salary`:
    - Salary values are in the range of approximately **0 to 1,000,000 (1e6)**
- **Colors**:
    - **Blue**: Male (M)
    - **Orange**: Female (F)
- **Shape of the violin**:
    - Shows **distribution density** (wider parts mean more people earning in that range).
    - The **thicker the section**, the more people in that salary range.
- **Black bar in the middle**:
    - Represents the **interquartile range (IQR)** (middle 50% of the data).
    - The **white dot** in the center shows the **median salary**.

✅ Insights from this plot:

1. **Mkt HR (Marketing & HR)**:
    - Both males and females have similar salary distributions.
    - Most salaries are concentrated in the lower range (~0 to 300,000).
    - Males may have a slightly higher spread.
2. **Mkt Fin (Marketing & Finance)**:
    - Male salaries show a **wider distribution** and some **higher values** (even above 1e6).
    - Female salaries are more concentrated in the lower range.
3. **Overall Observation**:
    - Male candidates in **Mkt Fin** specialization seem to have more chances of getting higher salaries.

- Female candidates in both specializations have more **compact and consistent salary ranges**.

💡 Summary:

This plot helps us understand how **gender and specialization** affect salary distribution. It's especially useful for spotting patterns, inequality, or differences in opportunities.