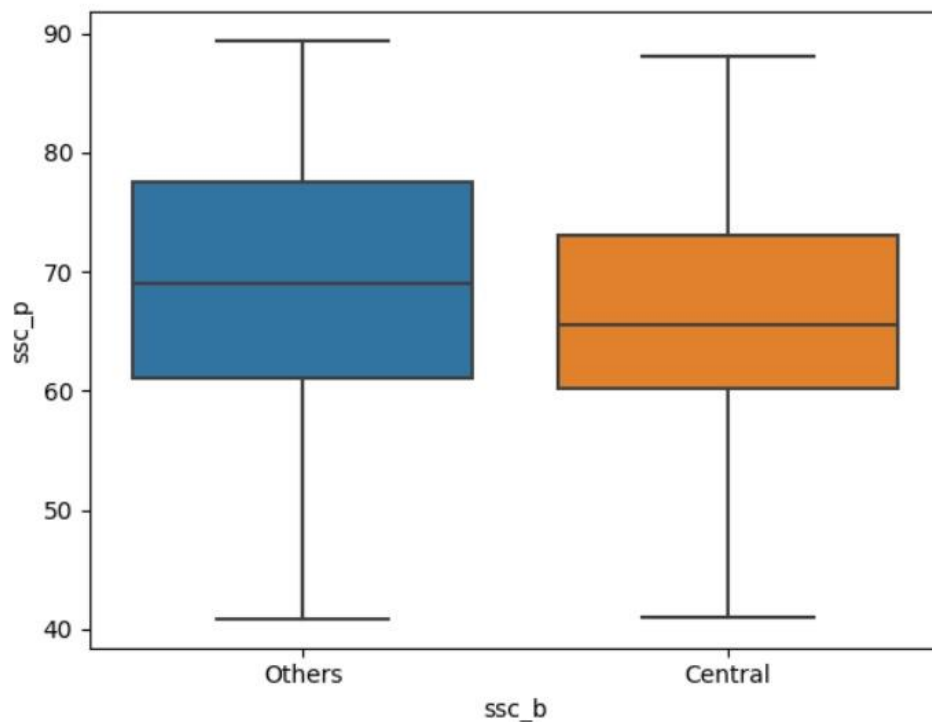


BOX PLOT

Box plot based on percentile INTER QUARTILE RANGE
Contains the middle 50% of the data. The bottom of the box represents the first quartile (Q1), and the top represents the third quartile (Q3). the spread and central tendency of a dataset.

```
[43]: import seaborn as sb
sb.boxplot(x="ssc_b",y="ssc_p",data=dataset)
plt.show()
```



In the comparison of SSC_b percentage scores between students from central and other boards, we initially utilize percentiles (specifically the interquartile range) Q1, Q2, Q3, and Q4.

For students from other boards in the SSC board category, the majority commence their scores at 61%, whereas central board students begin with a slightly lower average of 60% in SSC_b central.

BOX PLOT

In the SSC_b board category, the interquartile range (Q1 to Q2) for median average scores ranges from 61% to 69% for students from other boards. However, for central board students, the range narrows down to 60% to 66%.

When comparing the SSC_p scores in the 'ssc_b' category, central board students achieve a minimum score compared to students from other boards.

In the 'ssc_b' category, the second and third quartiles (Q2 and Q3) of SSC_p percentage scores for students from other boards range from 69% to 78% of the maximum score.

Conversely, for students from the central board in the 'ssc_b' category, the second and third quartiles (Q2 and Q3) of SSC_p percentage scores range from 60% to 66% across all SSC_p scores.

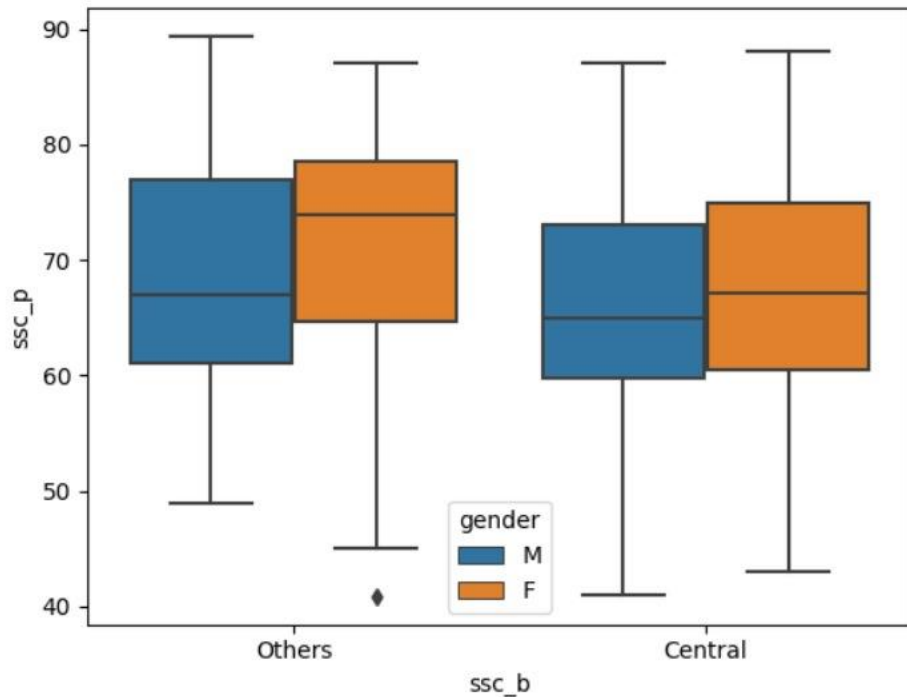
We have segregated male and female students from the 'ssc_b' category of both other and central boards.

Upon analysis, among males and females, there is a variation in the percentages of SSC_b scores ('ssc_p').

Specifically, gender obtains lower percentages of SSC_b scores in ('ssc_p'), while the other gender achieves higher percentages in ssc_p.

BOX PLOT

```
[44]: import seaborn as sb
      sb.boxplot(x="ssc_b",y="ssc_p",data=dataset,hue="gender")
      plt.show()
```



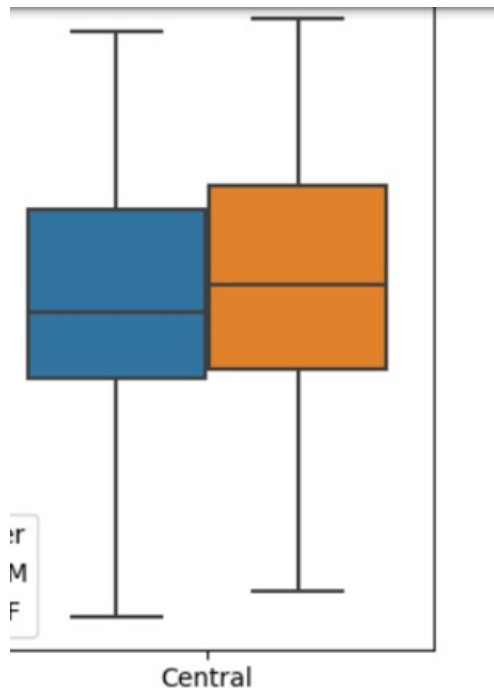
For males in the 'ssc_b' category of other boards, SSC_p percentage scores range from 61% to 67% between the first and second quartiles (Q1 and Q2), and from 67% to 78% between the second and third quartiles (Q2 and Q3).

For females in the 'ssc_b' category of other boards, SSC_p percentage scores range from 64% to 73% between the first and second quartiles (Q1 and Q2), and from 76% to 79% between the second and third quartiles (Q2 and Q3).

In the comparison of SSC percentage scores ('ssc_p') between males and females in the 'ssc_b' category of other boards, it is observed that males achieve a higher average

BOX PLOT

mark in SSC percentage scores ('ssc_p') compared to females, who attain a medium percentage level.



For males in the 'ssc_b' category of the central board, SSC percentage scores range from 62% to 65% between the first and second quartiles (Q1 and Q2), and from 65% to 77% between the second and third quartiles (Q2 and Q3).

For females in the 'ssc_b' category of the central board, SSC percentage scores range from 63% to 67% between the first and second quartiles (Q1 and Q2), and from 67% to 73% between the second and third quartiles (Q2 and Q3).

In the comparison of SSC percentage scores ('ssc_p') between males and females in the 'ssc_b' category of the central board, it is observed that males achieve a higher

BOX PLOT

average mark in SSC percentage scores ('ssc_p') compared to females, who attain a medium percentage level.
