

Loop 1

[ 5, 2, 8, 1, 9 ]



Swap index values since  $5 > 2$

[ 2, 5, 8, 1, 9 ]



We Skip 5 and 8 since  $8 > 5$  so no swap is need and we move onto 8 and 1

We see  $8 > 1$  so we swap index values

[ 2, 5, 1, 8, 9 ]

We Skip 8 and 9 since  $9 > 8$  so no swap is needed and we complete our first loop through

Loop 2

[ 2, 5, 1, 8, 9 ]



We skip 2 and 5 since  $5 > 2$  and we move to 5 and 1 since  $5 > 1$  we need to swap the index values

[ 2, 1, 5, 8, 9 ]

We continue to loop through the array and check for values that need to be swapped and we don't see any since  $5 < 8 < 9$  is in order so no swapping is needed

Loop 3

[ 2, 1, 5, 8, 9 ]



We see in our 3rd loop that we have 2 and 1 and since  $2 > 1$  we need to swap index values and check for any other swap cases

[ 1, 2, 5, 8, 9 ]

We see that after the above swap all the values in the array are sorted  $1 < 2 < 5 < 8 < 9$