

To make anything lexicographically
bigger, always attach left most
digit to maximize right side,
right approach is, right to left &
if a digit is placed here (maximize)
the digit is max (right digit max,
always attach max digit)

23496 → 9 is at 3rd place

maximize right, left most
maximize 9 is max (right max)

93426 max number.

left most max digit, (5 max digit)
(right,

864329123

964328123 ✓

864392123 ✗

if max left most max digit

index for '25'9' is (2, 5) & (2, 9)
minimum digit max_idx > 2,

```
class Solution:
    def maximumSwap(self, num: int) -> int:
        num_str = list(str(num))
        n = len(num_str)
        max_digit_index = -1
        swap_idx_1 = -1
        swap_idx_2 = -1

        # Traverse the string from right to left, tracking the
        # max digit and
        # potential swap
        for i in range(n - 1, -1, -1):
            if max_digit_index == -1 or num_str[i] >
num_str[max_digit_index]:
                max_digit_index = i # Update the index of the
max digit
            elif num_str[i] < num_str[max_digit_index]:
                swap_idx_1 = i # Mark the smaller digit for
swapping
                swap_idx_2 = (
                    max_digit_index # Mark the larger digit
for swapping
                )

        # Perform the swap if a valid swap is found
        if swap_idx_1 != -1 and swap_idx_2 != -1:
            num_str[swap_idx_1], num_str[swap_idx_2] = (
                num_str[swap_idx_2],
                num_str[swap_idx_1],
            )

        return int(
            "".join(num_str)
        ) # Return the new number or the original if no
        # swap occurred
```

