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COMSC 140 Python

Program Documentation for As5\_3\_Shift\_bits\_left\_right

1/ Link  
<https://github.com/DVC-COMSC/assignment-5-3-enduringwriter/blob/main/main.py>

2/ Program Purpose  
This program shifts the bits of a given binary string to the left or right by a specified number of positions, and padding the shifted bits with zeros.

Assumption:

3/ Input/Output Description  
Input = A binary string, a direction (0 for left, 1 for right), and the number of positions to shift.  
Output = The shifted binary string.

4/ Explanation of All Variables  
stringvalue = Binary string to be shifted.  
direction = Direction to shift the bits (0 for left, 1 for right).  
N = Positions to shift the bits.  
shifted\_string = Binary string after shifting.

5/ Flow Chart  
Start > Input a binary string, direction, and number of positions to shift > Check direction value (0 for left, 1 for right) > If direction is 0, shift bits to the left, pad zeros on the right-side end > If direction is 1, shift bits to the right, and pad with zeros at the beginning of the left-side > Output the modified bit string > End

6/ Lesson Learned  
Manipulate bits with padding and indexing.

7/ Errors

Missing ‘:’ after if statement. Added “’0’ \* N” on the wrong side for right shift.