You are given a **dummy headed doubly circular** linked list *X*, and a non-dummy headed singly linear linked list *A*. You need to insert *A* at the *k* th index of *X*. The resulting linked list will also be dummy headed doubly circular.

Write a function **insert\_list(head\_X, head\_A, k)**. Just completing this function will suffice.

**Note:** Assume that Node class is given

| **Sample Input** | **Sample Output** |
| --- | --- |
| **X = DH ⇔ 2 ⇔ 3 ⇔ 1 ⇔ 9**  **A = 4 -> 8**  **k = 2** | **DH ⇔ 2 ⇔ 3 ⇔ 4 ⇔ 8 ⇔ 1 ⇔ 9** |
| **X = DH ⇔ 2 ⇔ 3 ⇔ 1 ⇔ 9**  **A = 5 -> 4 -> 6**  **k = 0** | **DH ⇔ 5 ⇔ 4 ⇔ 6 ⇔ 2 ⇔ 3 ⇔ 1 ⇔ 9** |

You are given the head of a **dummy headed doubly circular** linked list. You need to remove some nodes from this linked list so that no two consecutive nodes have exactly the same element.

Write a function **multi\_delete(head)**. Just completing this function will suffice.

**Note:** Assume that Node class is given.

| **Sample Input** | **Sample Output** |
| --- | --- |
| **DH ⇔ 2 ⇔ 3 ⇔ 3 ⇔ 1 ⇔ 1 ⇔ 1 ⇔ 9** | **DH ⇔ 2 ⇔ 3 ⇔ 1 ⇔ 9** |
| **DH ⇔ 2 ⇔ 3 ⇔ 1 ⇔ 9** | **DH ⇔ 2 ⇔ 3 ⇔ 1 ⇔ 9** |