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Question → 2

(a)
```
def insert ( lst, k, lst2 = [] ) :
    '''
    Parameters : Given list, Element to insert, new
                                                    list)
    Input Output : Insert element at alternate.
                    position of a given list   '''

    if len (lst) == 0 :   # when list is empty
        return lst2       # return new empty list
    else :
        lst2. extend ([lst[0], k)   # extending list
        return insert (lst [1:], k, lst2)

print (insert([1,2,3,4], 50))   # for defined list
                            # call fun & print
''' Output :
        [1, 50, 2, 50, 3, 50, 4, 50]

'''
```

(b) dy remove (lst, k):

```
""" Input : taking user input list and a number
              k
    Output : new list having element which
             is not k
    """
    lst2 = []        # taking new list empty
    for i in lst:    # iterate through list
        if i != k :      # check if equal to k or not
            lst2. append (i)  # append it in lst2
    return lst2        # return list

dy main ():  # defined main function

    n = int(input (" Enter element "))
    l = list (map(int, input (" Enter a list ").
                                    split (" ")))
    print ( remove ( l, n) )  # print output

    if __name__ == " __main__ " :
        main ()    # calling main function
```

""" Assumptions = It well work for my
               desired format & give
    error when list is empty so give
    input in desired format """