Python | Separate odd and even index elements

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Python list are quite popular and no matter what type of field one is coding, one has to deal with lists and its various applications. In this particular article, we discuss ways to separate odd and even indexed elements and its reconstruction join. Let's discuss ways to achieve this.

Method #1 : Using Naive method

Using Naive method, this task can be performed by using the loops. One can use two containers one each to store alternate elements and later joining them.

```
# Python3 code to demonstra
# Separating odd and even
# using naive method

# initializing list
test_list = [3, 6, 7, 8, 9

# printing original list
print("The original list :

# using naive method
# Separating odd and even
odd_i = []
even_i = []
for i in range(0, len(test
    if i % 2:
        even_i.append(test
    else :
        odd_i.append(test_

res = odd_i + even_i

# print result
print("Seprated odd and eve
```

Output :

```
The original list : [3, 6,
Seprated odd and even index
```

Method #2 : Using list slicing

This particular task can be easily performed using the list slicing method in a more compact and efficient manner, this is a recommended method to solve this problem.

```
# Python3 code to demonstra
# Separating odd and even
# Using list slicing

# initializing list
test_list = [3, 6, 7, 8, 9

# printing original list
print("The original list :

# Using list slicing
# Separating odd and even
res = test_list[::2] + tes

# print result
print("Seprated odd and eve
```

Output :

```
The original list : [3, 6,
Seprated odd and even index
```

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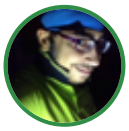

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