4 SUM

```python
def four_sum(nums, target):
    nums.sort()
    res = []
    n = len(nums)
    for i in range(n - 3):
        if i > 0 and nums[i] == nums[i - 1]:
            continue
        for j in range(i + 1, n - 2):
            if j > i + 1 and nums[j] == nums[j - 1]:
                continue

            left, right = j + 1, n - 1
            while left < right:
                four_sum = nums[i] + nums[j] + nums[left] + nums[right]
                if four_sum == target:
                    res.append([nums[i], nums[j], nums[left], nums[right]])
                    left += 1
                    right -= 1
                    while left < right and nums[left] == nums[left - 1]:
                        left += 1
                    while left < right and nums[right] == nums[right + 1]:
                        right -= 1
                elif four_sum < target:
                    left += 1
                else:
                    right -= 1

    return res
nums = [1, 0, -1, 0, -2, 2]
target = 0
print(four_sum(nums, target))
```