# Pair-Sum-to-target

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### 0.0.1 Problem statement

Given an `input_list` and a `target`, return the pair of indices in the list that holds the values which sum to the `target`. For example,

`input_list = [1, 5, 9, 7]` and `target = 8`, the answer would be `[0, 3]`

**Note** 1. The best solution takes O(n) time. *This means that you cannot traverse the given list more than once.* **Hint - Think of an additional data structure that you should use here.** 2. You can assume that the list does not have any duplicates.

```
In [1]: def pair_sum_to_target(input_list, target):
            # TODO: Write pair sum to target function
            pass
```

```
In [2]: def test_function(test_case):
            output = pair_sum_to_target(test_case[0], test_case[1])
            print(output)
            if sorted(output) == test_case[2]:
                print("Pass")
            else:
                print("Fail")
```

```
In [ ]: test_case_1 = [[1, 5, 9, 7], 8, [0, 3]]
        test_function(test_case_1)
```

```
In [ ]: test_case_2 = [[10, 5, 9, 8, 12, 1, 16, 6], 16, [0, 7]]
        test_function(test_case_2)
```

```
In [ ]: test_case_3 = [[0, 1, 2, 3, -4], -4, [0, 4]]
        test_function(test_case_3)
```

Show Solution