Categorize a List of Numbers into Even, Odd, Positive, and Negative Using a Dictionary

Problem Statement

Given a list of integers, categorize the numbers into even, odd, positive, and negative using a dictionary. The dictionary should have four keys: "even", "odd", "positive", and "negative". Each key should map to a list containing the numbers that fall under that category.

Input Format

- A list of integers.

Output Format

- A dictionary with four keys: "even", "odd", "positive", and "negative". Each key should map to a list of integers.

Example

Input

```
[1, -2, 3, 4, -5, 6, -7]
```

Output

```
{'even': [-2, 4, 6], 'odd': [1, 3, -5, -7], 'positive': [1, 3, 4, 6], 'negative': [-2, -5, -7]}
```

Constraints

- The input list can contain any number of integers, including zero.