Map.fromIterable: Creates a Map from a single iterable by using two functions:

- key: A function that generates the key for each element in the iterable.
- value (optional): A function that generates the value for each element; if omitted, the element itself is used as the value.

Ex: void main()

```
{
    var list = ['a', 'b', 'c'];

  var map = Map.fromIterable(
      list,
      key: (item) => item,
      value: (item) => item.toUpperCase(),
       );
  print(map); //{a:A,b:B,c:C}
}
```

Map.fromIterables: Creates a Map from two separate iterables:

- One iterable provides the keys.
- The other iterable provides the values.

Ex: void main()

```
{
    var keys = ['x', 'y', 'z'];

    var values = [10, 20, 30];

    var map = Map.fromIterables(keys, values);
```

```
        print(map); //{x:10,y:20,z:30}


    }
```

Iteration of Maps:

1) Create and print a Map

```
Ex: void main()
    {
        Map<String, dynamic> user = {
        "Username": "Alice",
        "Score": 85,
        };
        print(user);
    }
```

2) Use forEach to print key-value pairs

```
Ex: void main()
    {
        Map<String, dynamic> user = {
        "Username": "Alice",
        "Score": 85,
         };
        user.forEach((key, value) {
        print("$key => $value");
         });
    }
```

3) Use for-in loop on entries

```
Ex: void main()
    {
        Map<String, dynamic> user = {
        "Username": "Alice",
        "Score": 85,
```

```
      };
    for (var entry in user.entries) {
    print("Key: ${entry.key}, Value: ${entry.value}");
      }
    }
```

4) Iterate only over values

```
Ex: void main()
    {
       Map<String, dynamic> user = {
       "Username": "Alice",
       "Score": 85,
        };

  for (var value in user.values) {
  print(value);
      }
}
```

5) Print the number of entries

```
Ex: void main()
    {
       Map<String, dynamic> user = {
       "Username": "Alice",
       "Score": 85,
        };
        print("Total entries: ${user.length}");
    }
```

6) Access entries via index after converting to list

```
Ex: void main()
    {
       Map<String, dynamic> user = {
```

```
  "Username": "Alice",
   "Score": 85,
    };
 var entriesList = user.entries.toList();
 for (int i = 0; i < entriesList.length; i++) {
 print("Entry $i: ${entriesList[i].key} = ${entriesList[i].value}");
  }
}
```