

(HashMap)

- description : HashMap
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HashMap

Array: 가 , 가
ArrayList :

```
List , ArrayList 가 ,  
(int type),
```

HashMap :

```
Map "key/value" Map  
String value ( )
```

- 가 : put()
- : get()
- : remove()
- : clear()
- : size()

```
package sec01.hashMap;  
  
import java.util.HashMap;  
  
public class HashMapExample1 {
```

```
public static void main(String[] args) {

    HashMap<String, String> capitalCities = new HashMap<String,
String>();

    // Add items
    capitalCities.put("England", "London");
    capitalCities.put("Germany", "Berlin");
    capitalCities.put("Norway", "Oslo");
    capitalCities.put("USA", "Washington DC");

    // To find out how many items there are, use the size() method
    System.out.println("There are " + capitalCities.size() + " items");
    // There are 4 items

    System.out.println("capitalCities : " + capitalCities);
    // capitalCities : {USA=Washington DC, Norway=Oslo, England=London,
Germany=Berlin}

    // Access an item
    // To access a value in the HashMap, use the get() method and refer
to its key
    System.out.println("England : " + capitalCities.get("England"));
    // England : London

    // to remove an item, use the remove() method and refer to the key
    capitalCities.remove("England");
    System.out.println("after removing England, capitalCities : " +
capitalCities);
    //after removing England, capitalCities : {USA=Washington DC,
Norway=Oslo, Germany=Berlin}

    // To remove all items, use the clear() method
    capitalCities.clear();
    System.out.println("after clearing, capitalCites : " +
capitalCities);
    // after clearing, capitalCites : {}
}
}
```

keySet()

key

```
package sec01.hashMap;

import java.util.HashMap;
```

```
public class HashMapExample_keySet {

    public static void main(String[] args) {

        HashMap<String, String> capitalCities = new HashMap<String,
String>();

        capitalCities.put("England", "London");
        capitalCities.put("Germany", "Berlin");
        capitalCities.put("Norway", "Oslo");
        capitalCities.put("USA", "Washington DC");

        System.out.println("capitalCities : " + capitalCities);

        // Loop through the items of a HashMap with a for-each loop
        // Use the keySet() method to get only the keys

        for (String i : capitalCities.keySet()) {
            System.out.println("capitalCities key : " + i);
            //capitalCities key : USA
            //capitalCities key : Norway
            //capitalCities key : England
            //capitalCities key : Germany
        }
    }
}
```

values()

(value)

```
package sec01.hashMap;

import java.util.HashMap;
import java.util.Map;

public class HashMapExample_Values {

    public static void main(String[] args) {

        HashMap<String, String> capitalCities = new HashMap<String,
String>();
        capitalCities.put("England", "London");
        capitalCities.put("Germany", "Berlin");
        capitalCities.put("Norway", "Oslo");
        capitalCities.put("USA", "Washington DC");
    }
}
```

```
// Use the values() method if you only want the values
for (String i : capitalCities.values()) {
    System.out.println("capitalCities Values ::: " + i);
    //capitalCities Values ::: Washington DC
    //capitalCities Values ::: Oslo
    //capitalCities Values ::: London
    //capitalCities Values ::: Berlin
}
}
```

key value

```
package sec01.hashMap;

import java.util.HashMap;
import java.util.Map;

public class HashMapExample_keySet_and_values {

    public static void main(String[] args) {

        Map<String, String> capitalCities = new HashMap<String, String>();

        capitalCities.put("England", "London");
        capitalCities.put("Germany", "Berlin");
        capitalCities.put("Norway", "Oslo");
        capitalCities.put("USA", "Washington DC");

        for (String keyAndVal : capitalCities.keySet()) {
            System.out.println("key : " + keyAndVal + "\t" + "value : " +
capitalCities.get(keyAndVal));
            //key : USA           value : Washington DC
            //key : Norway       value : Oslo
            //key : England      value : London
            //key : Germany       value : Berlin
        }
    }
}
```

(primitive type: byte, short, int, float, double, boolean, char)

. wrapper class .

wrapper class:

```
package sec01.hashMap;

import java.util.HashMap;

public class HashMap_other_types {

    public static void main(String[] args) {

        // people      HashMap
        HashMap<String, Integer> people = new HashMap<String, Integer>();

        // key value   가
        people.put("John", 32);
        people.put("Steve", 30);
        people.put("Angie", 33);

        for(String key : people.keySet()) {
            System.out.println("Name : " + key + "\t" + " Age : " +
people.get(key));
            //Name : Angie      Age : 33
            //Name : Steve      Age : 30
            //Name : John       Age : 32
        }
    }
}
```

Ref Link

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