(HashMap)

- description : HashMap
- author :
- email : shlim@repia.com
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HashMap

Array: ,
ArrayList :

```
List                         , ArrayList                    ,

                                    ,
        (int type)
```

HashMap :

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

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

```java
package sec01.hashMap;

import java.util.HashMap;

public class HashMapExample1 {
```

```java
    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

```java
package sec01.hashMap;
```

```java
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)

```java
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");
```

```java
        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

```java
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", "Washingto DC");

        for (String keyAndVal : capitalCities.keySet()) {
            System.out.println("key : " + keyAndVal + "\t" + "value : " +
capitalCities.get(keyAndVal));
            //key : USA        value : Washingto 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:

```java
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
        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

[Java HashMap](#)

,, [HashMap](#),,