```
package hashmap1;

import java.util.HashMap;

public class HashMap1
{

    public static void main(String[] args)
    {
       // Step 1: create new HashMap.
        HashMap<String, Integer> hash = new HashMap<>();

        // Step 2: put 3 keys with values.
        hash.put("dog", 1);
        hash.put("cat", 2);
        hash.put("bird", 3);

        // Step 3: lookup a known value.
        int result = hash.get("cat");

        // Step 4: display result.
        System.out.println("RESULT: " + result);
    }

}
//2
```

```
package hashmap2;
import java.util.HashMap;
import java.util.Set;
public class HashMap2
{

    public static void main(String[] args)
    {
          // Create HashMap of three entries.
        HashMap<String, Integer> h = new HashMap<>();
        h.put("apple", 1);
        h.put("peach", 2);
        h.put("guava", 3);

        // Get keys.
        Set<String> keys = h.keySet();

        // Loop over String keys.
        for (String key : keys) {
            System.out.println(key);
        }
    }

}
//apple
//peach
//guava
```

```
package hashmap3;

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

public class HashMap3
{

    public static void main(String[] args)
    {
         // Create HashMap and put 3 entries in it.
        HashMap<String, Integer> values = new HashMap<>();
        values.put("Java", 6);
        values.put("Python", 4);
        values.put("C#", 5);

        // Loop over HashMap with entrySet.
        // ... The ordering is not maintained.
        for (Entry<String, Integer> pair : values.entrySet()) {
            System.out.println(pair.getKey() + "::" + pair.getValue());
        }
    }

}
//C#::5
//Java::6
//Python::4
```

```
package hashmap4;

import java.util.HashMap;

public class HashMap4
{

    public static void main(String[] args)
    {
        // Create an Integer HashMap.
        HashMap<Integer, Integer> h = new HashMap<>();
        h.put(1, 1000);
        h.put(20, 1001);
        h.put(300, 1003);

        // Use containsKey.
        if (h.containsKey(1)) {
            System.out.println("1 was found");
        }
        if (h.containsKey(300)) {
            System.out.println("300 was found");
        }
        if (!h.containsKey(400)) {
            System.out.println("400 was not found");
        }
    }

}
//1 was found
//300 was found
//400 was not found
```

```
package hashmap5;

import java.util.HashMap;

public class HashMap5 {

    public static void main(String[] args)
    {
        // Create a HashMap of fruit and their color.
        HashMap<String, String> fruit = new HashMap<>();
        fruit.put("apple", "red");
        fruit.put("orange", "orange");
        fruit.put("banana", "yellow");
        fruit.put("raspberry", "red");

        // See if there is a red value.
        if (fruit.containsValue("red")) {
            System.out.println("Red fruit detected!");
            //Red fruit detected!

            // Loop over all keys and print them if they have "red" values.
            for (String key : fruit.keySet()) {
                if (fruit.get(key) == "red") {
                    System.out.println(key);
                }
            }
        }
    }

}
//apple
//raspberry
```