Java HashMap.putAll() – Syntax & Examples

Java HashMap.putAll() – Examples

In this tutorial, we will learn about the Java HashMap.putAll() function, and learn how to use this function to copy mappings from the specified map to this map, with the help of examples.

putAll(Map<K, V> m)

HashMap.putAll() copies all of the mappings from the specified map to this HashMap.

If a mapping with specific key from `m` is already present in this HashMap, then the value for the key is updated in this HashMap.

Syntax

The syntax of putAll() function is

```
putAll(Map<? extends K,? extends V> m)
```

where

Parameter	Description
m	Map (of key-value pairs) to be put in this HashMap.

Returns

The function returns void.

Example 1 – putAll() – Map with New Keys

In this example, we will initialize two HashMaps `hashMap1` and `hashMap2`. We will take the mappings in these HashMaps such that no key of `hashMap2` is present in `hashMap1`.

We will put all the mappings from `hashMap2` into the `hashMap1` by calling putAll() on `hashMap1` with `hashMap2` passed as argument. Since, all the keys of `hashMap2` are not present in `hashMap1`, all the mappings of `hashMap2` will be put in `hashMap1`.

Java Program

```
import java.util.HashMap;

public class Example{
    public static void main(String[] args) {
        HashMap<Integer, String> hashMap1 = new HashMap<>();
        hashMap1.put(1, "A");
        hashMap1.put(2, "B");
        hashMap1.put(3, "C");
        hashMap1.put(4, "D");
        System.out.println("HashMap 1  : " + hashMap1);

        HashMap<Integer, String> hashMap2 = new HashMap<>();
        hashMap2.put(5, "E");
        hashMap2.put(6, "F");
        hashMap2.put(7, "G");
        System.out.println("HashMap 2  : " + hashMap2);

        hashMap1.putAll(hashMap2);
        System.out.println("HashMap 1 after putAll() : " + hashMap1);
    }
}
```

Output

```
HashMap 1  : {1=A, 2=B, 3=C, 4=D}
HashMap 2  : {5=E, 6=F, 7=G}
HashMap 1 after putAll() : {1=A, 2=B, 3=C, 4=D, 5=E, 6=F, 7=G}
```

Example 2 – putAll() – Map with Same Keys

In this example, we will initialize two HashMaps `hashMap1` and `hashMap2`. We will take the mappings in these HashMaps such that all/some keys of `hashMap2` are present in `hashMap1`.

We will put all the mappings from `hashMap2` into the `hashMap1` by calling putAll() on `hashMap1` with `hashMap2` passed as argument. Since, the keys of `hashMap2`, `3` and `4` are present in `hashMap1`, the mappings of `hashMap2` will update the mappings in `hashMap1`.

Java Program

```
import java.util.HashMap;

public class Example{
    public static void main(String[] args) {
        HashMap<Integer, String> hashMap1 = new HashMap<>();
        hashMap1.put(1, "A");
```

```
        hashMap1.put(2, "B");
        hashMap1.put(3, "C");
        hashMap1.put(4, "D");
        System.out.println("HashMap 1  : " + hashMap1);

        HashMap<Integer, String> hashMap2 = new HashMap<>();
        hashMap2.put(3, "E");
        hashMap2.put(4, "F");
        System.out.println("HashMap 2  : " + hashMap2);

        hashMap1.putAll(hashMap2);
        System.out.println("HashMap 1 after putAll() : " + hashMap1);
    }
}
```

Output

```
HashMap 1  : {1=A, 2=B, 3=C, 4=D}
HashMap 2  : {3=E, 4=F}
HashMap 1 after putAll() : {1=A, 2=B, 3=E, 4=F}
```

Example 3 – putAll() – Null Map

In this example, we will initialize two HashMaps `hashMap1` and `hashMap2`. `hashMap1` has mappings in it and `hashMap2` is null.

When we pass a null HashMap object to putAll() method, it throws java.lang.NullPointerException.

Java Program

```
import java.util.HashMap;

public class Example{
    public static void main(String[] args) {
        HashMap<Integer, String> hashMap1 = new HashMap<>();
        hashMap1.put(1, "A");
        hashMap1.put(2, "B");
        hashMap1.put(3, "C");
        hashMap1.put(4, "D");
        System.out.println("HashMap 1  : " + hashMap1);

        HashMap<Integer, String> hashMap2 = null;

        hashMap1.putAll(hashMap2);
        System.out.println("HashMap 1 after putAll() : " + hashMap1);
    }
}
```

Output

```
HashMap 1  : {1=A, 2=B, 3=C, 4=D}
Exception in thread "main" java.lang.NullPointerException
    at java.base/java.util.HashMap.putMapEntries(Unknown Source)
```

```
    at java.base/java.util.HashMap.putMapEntries(Unknown Source)
    at java.base/java.util.HashMap.putAll(Unknown Source)
    at Example.main(Example.java:14)
```

Conclusion

In this Java Tutorial, we have learnt the syntax of Java HashMap.putAll() function, and also learnt how to use this function with the help of examples.

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