**How to serialize HashMap in java**

[**JAVA COLLECTIONS**](http://beginnersbook.com/category/java-collections/)

HashMap class is serialized by default which means we need not to implement Serializable interface in order to make it eligible for Serialization. In this tutorial we will learn **How to write HashMap object and it’s content into a file** and **How to read the HashMap object from the file.**Before I share the complete code for this let me give a brief info about Serialization and De-serialization.

Serialization: It is a process of writing an Object into file along with its attributes and content. It internally converts the object in stream of bytes.

De-Serialization: It is a process of reading the Object and it’s properties from a file along with the Object’s content.

**Example:**

**Serialization of HashMap:**In the below class we are storing the HashMap content in a hashmap.ser serialized file. Once you run the below code it would produce a hashmap.ser file. This file would be used in the next class for de-serialization.

package beginnersbook.com;

import java.io.\*;

import java.util.HashMap;

public class Details

{

public static void main(String [] args)

{

HashMap<Integer, String> hmap = new HashMap<Integer, String>();

//Adding elements to HashMap

hmap.put(11, "AB");

hmap.put(2, "CD");

hmap.put(33, "EF");

hmap.put(9, "GH");

hmap.put(3, "IJ");

try

{

FileOutputStream fos =

new FileOutputStream("hashmap.ser");

ObjectOutputStream oos = new ObjectOutputStream(fos);

oos.writeObject(hmap);

oos.close();

fos.close();

System.out.printf("Serialized HashMap data is saved in hashmap.ser");

}catch(IOException ioe)

{

ioe.printStackTrace();

}

}

}

Output:

Serialized HashMap data is saved in hashmap.ser

**De-Serialization:**Here we are reproducing the HashMap object and it’s content from a serialized file which we have created by running the above code.

package beginnersbook.com;

import java.io.\*;

import java.util.HashMap;

import java.util.Map;

import java.util.Iterator;

import java.util.Set;

public class Student

{

public static void main(String [] args)

{

HashMap<Integer, String> map = null;

try

{

FileInputStream fis = new FileInputStream("hashmap.ser");

ObjectInputStream ois = new ObjectInputStream(fis);

map = (HashMap) ois.readObject();

ois.close();

fis.close();

}catch(IOException ioe)

{

ioe.printStackTrace();

return;

}catch(ClassNotFoundException c)

{

System.out.println("Class not found");

c.printStackTrace();

return;

}

System.out.println("Deserialized HashMap..");

// Display content using Iterator

Set set = map.entrySet();

Iterator iterator = set.iterator();

while(iterator.hasNext()) {

Map.Entry mentry = (Map.Entry)iterator.next();

System.out.print("key: "+ mentry.getKey() + " & Value: ");

System.out.println(mentry.getValue());

}

}

}

Output:

Deserialized HashMap..

key: 9 & Value: GH

key: 2 & Value: CD

key: 11 & Value: AB

key: 33 & Value: EF

key: 3 & Value: IJ