



Generating Json

Building a json object



Using javax.json

First we'll show you how to create JSON using the javax.json API.

You'll need to have the javax.json.jar (see the wiki for how to obtain it) for this part of the example.

Basic idea

Create a `JsonWriter`

Build a `JsonObject`

Write the `JsonObject`

Example - writing to a file

```
writer=new PrintWriter(jsonFile);
```

```
JsonWriter jWriter = Json.createWriter(writer);
```

```
...
```

```
jWriter.writeObject(jo);
```

```
jWriter.close();
```

Building the json object

```
{  
  "firstName": "Hanky",  
  "lastName": "Sandycleavage",  
  "age": 65, "streetAddress": "Skidrow 88",  
  "State": "VGR",  
  "postalCode": "66613",  
  "phoneNumbers": [  
    {"Mobile": "0700123321"},  
    {"Home": "031-90 51 06"}]  
}
```

Building the json object

```
JsonObject jo = Json.createObjectBuilder()  
    .add("firstName", "Hanky")  
    .add("lastName", "Sandycleavage")  
    .add("age", 65)  
    .add("streetAddress", "Skidrow 88")  
    .add("State", "VGR")  
    .add("postalCode", "66613")  
    .add("phoneNumbers", Json.createArrayBuilder()  
        .add(Json.createObjectBuilder()  
            .add("Mobile", "0700123321"))  
        .add(Json.createObjectBuilder()  
            .add("Home", "031-90 51 06")))  
    .build();
```

Complete code

```
public void createAndWrite() throws IOException {
    this.writer=new PrintWriter(jsonFile);
    JsonWriter jWriter = Json.createWriter(writer);
    JsonObject jo = Json.createObjectBuilder()
        .add("firstName","Hanky")
        .add("lastName","Sandycleavage")
        .add("age",65)
        .add("streetAddress","Skidrow 88")
        .add("State","VGR")
        .add("postalCode","66613")
        .add("phoneNumbers", Json.createArrayBuilder()
            .add(Json.createObjectBuilder()
                .add("Mobile", "0700123321"))
            .add(Json.createObjectBuilder()
                .add("Home", "031-90 51 06")))
        .build();
    jWriter.writeObject(jo);
    jWriter.close();
}
```

Import statements

```
import javax.json.Json;  
import javax.json.JsonObject;  
import javax.json.JsonWriter;  
import javax.json.JsonWriterFactory;  
import javax.json.stream.JsonGenerator;
```


Using org.json

Next, we'll show you how to create JSON using the org.json API.

For this, you'll need the org.json JAR file.

Basic steps

- Create a JSONObject
- Add key-value pairs to the object
- Add an array to the object (using accumulate)
- Create an indented String of the JSONObject (using an overloaded version of toString())
- Write the String to file

Building the json object

```
{  
  "firstName": "Hanky",  
  "lastName": "Sandycleavage",  
  "age": 65, "streetAddress": "Skidrow 88",  
  "State": "VGR",  
  "postalCode": "66613",  
  "phoneNumbers": [  
    {"Mobile": "0700123321"},  
    {"Home": "031-90 51 06"}]  
}
```

Code for creating the JSONObject

```
JSONObject jo = new JSONObject();
jo.put("firstName","Hanky")
    .put("lastName","Sandycleavage")
    .put("age",65)
    .put("streetAddress","Skidrow 88")
    .put("State","VGR")
    .put("postalCode","66613");
JSONObject mobile = new JSONObject();
mobile.put("Mobile", "0700123321");
jo.accumulate("phoneNumbers", mobile);
JSONObject home = new JSONObject();
home.put("Home", "031-90 51 06");
jo.accumulate("phoneNumbers", home);
String json = jo.toString(2); // indent steps: 2
```

Complete method for creating and writing to file

```
public void createAndWrite() throws IOException {
    try {
        JSONObject jo = new JSONObject();
        jo.put("firstName","Hanky").put("lastName","Sandycleavage").put("age",65)
            .put("streetAddress","Skidrow 88").put("State","VGR").put("postalCode","66613");
        JSONObject mobile = new JSONObject();
        mobile.put("Mobile", "0700123321");
        jo.accumulate("phoneNumbers", mobile);
        JSONObject home = new JSONObject();
        home.put("Home", "031-90 51 06");
        jo.accumulate("phoneNumbers", home);
        String json = jo.toString(2); // indent steps: 2
        // Print the json object to a file
        writer = new PrintWriter(jsonFile);
        writer.println(json);
        writer.close();
    } catch (JSONException e) {
        System.err.println("Error creating JSON: " + e.getMessage());
    }
}
```

Import statements for org.json version

```
import java.io.*;
import org.json.*; // JSONObject, JSONException

// As with parsing JSON, org.json requires fewer classes
```