

## NFC\_Secure\_Element\_Example\_Java\_Card\_for\_Nokia6131

This is the code for the JAR file in order to compile a real Java Card CAP File and put into the secure element of the Nokia 6131 (make sure you have either [G&D SmartC@fe](#), [SUN's JavaCard Developer Kit](#) for JavaCard or [JCOP Tools](#) at hand). Download appropriate Eclipse/JCOP Project: [File:Ticket Applet.zip](#).

```
/**
 * Implementation of very simple wallet. The Wallet Container holds a
 * value (byte) which can be increase, decreased and read by sending
 * an appropriate APDU
 */
package congress;

import javacard.framework.APDU;
import javacard.framework.ISO7816;
import javacard.framework.Applet;
import javacard.framework.ISOException;

/**
 * @author gmadlmay
 */
public class Ticketing extends Applet {

/**
 * command set for communication between the
 * J2ME application and Java Card Applet as well as
 * the Java card Applet and the external reader
 */

// Command (APDU INS) for increasing the value in the wallet
private final static byte INS_INC = 0x01;

// Command (APDU INS) for decreasing the value in the wallet
private final static byte INS_DEC = 0x02;

// command (APDU INS) for reading the value in the wallet
private final static byte INS_READ = 0x03;

// variable holding the amount stored in the wallet.
private byte value = (byte) 0x20;

public static void install(byte[] bArray, short bOffset, byte bLength) {
// GP-compliant JavaCard applet registration
new Ticketing()
register(bArray, (short) (bOffset + 1), bArray[bOffset]);
}

public void process(APDU apdu) {
// Good practice: Return 9000 on SELECT
if (selectingApplet()) {
return;
}

// grab the byte-array of the APDU
byte[] buf = apdu.getBuffer();

// check the INS Byte of the APDU and take
// the appropriate action
switch (buf[ISO7816.OFFSET_INS]) {

// increase the value in the wallet
case (byte) INS_INC:
```

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```
if (value < 0xff)
    ++;
    value

// return no error, in case everything was okay
    throwIt (ISO180ExcepNoERROR);
break;

// increase the value in the wallet
case (byte) INS_DEC:
if (value > 0x00)
    --;
    value
// return no error, in case everything was okay
    throwIt (ISO180ExcepNoERROR);
break;

// read the value of the wallet
case (byte) INS_READ:

// create a byte array out of the value (length: 1)
byte[] outBuffer = new byte[1];
    [0] = value;    outBuffer

// now send back the data.
    setOutgoing();    apdu.
    setOutgoingLength((byte) outBuffer.length);
    sendBytesLong(outBuffer, (short) 0, (byte) outBuffer.length);

break;

// all other INS
default:
// good practice: If you don't know the INstruction, say so:
    throwIt (ISO180ExcepNotNOT_SUPPORTED);
}
}
}
```