

20个非常实用的Java程序代码片段



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20个非常实用的Java程序代码片段

# 1. 字符串有整型的相互转换

String a = String.valueOf(2); //integer to numeric string

int i = Integer.parseInt(a); //numeric string to an int

# 2. 向文件末尾添加内容

BufferedWriter out = null;

try {

out = new BufferedWriter(new FileWriter(”filename”, true));

out.write(”aString”);

} catch (IOException e) {

// error processing code

} finally {

if (out != null) {

out.close();

}

}

# 3. 得到当前方法的名字

String methodName = Thread.currentThread().getStackTrace()[1].getMethodName();

# 4. 转字符串到日期

java.util.Date = java.text.DateFormat.getDateInstance().parse(date String);

或者是：

SimpleDateFormat format = new SimpleDateFormat( "dd.MM.yyyy" );

Date date = format.parse( myString );

# 5. 使用JDBC链接Oracle

public class OracleJdbcTest

{

String driverClass = "oracle.jdbc.driver.OracleDriver";

Connection con;

public void init(FileInputStream fs) throws ClassNotFoundException, SQLException, FileNotFoundException, IOException

{

Properties props = new Properties();

props.load(fs);

String url = props.getProperty("db.url");

String userName = props.getProperty("db.user");

String password = props.getProperty("db.password");

Class.forName(driverClass);

con=DriverManager.getConnection(url, userName, password);

}

public void fetch() throws SQLException, IOException

{

PreparedStatement ps = con.prepareStatement("select SYSDATE from dual");

ResultSet rs = ps.executeQuery();

while (rs.next())

{

// do the thing you do

}

rs.close();

ps.close();

}

public static void main(String[] args)

{

OracleJdbcTest test = new OracleJdbcTest();

test.init();

test.fetch();

}

}

# 6. 把 Java util.Date 转成 sql.Date

java.util.Date utilDate = new java.util.Date();

java.sql.Date sqlDate = new java.sql.Date(utilDate.getTime());

# 7. 使用NIO进行快速的文件拷贝

public static void fileCopy( File in, File out )

throws IOException

{

FileChannel inChannel = new FileInputStream( in ).getChannel();

FileChannel outChannel = new FileOutputStream( out ).getChannel();

try

{

// inChannel.transferTo(0, inChannel.size(), outChannel); // original -- apparently has trouble copying large files on Windows

// magic number for Windows, 64Mb - 32Kb)

int maxCount = (64 \* 1024 \* 1024) - (32 \* 1024);

long size = inChannel.size();

long position = 0;

while ( position < size )

{

position += inChannel.transferTo( position, maxCount, outChannel );

}

}

finally

{

if ( inChannel != null )

{

inChannel.close();

}

if ( outChannel != null )

{

outChannel.close();

}

}

}

# 8. 创建图片的缩略图

private void createThumbnail(String filename, int thumbWidth, int thumbHeight, int quality, String outFilename)

throws InterruptedException, FileNotFoundException, IOException

{

// load image from filename

Image image = Toolkit.getDefaultToolkit().getImage(filename);

MediaTracker mediaTracker = new MediaTracker(new Container());

mediaTracker.addImage(image, 0);

mediaTracker.waitForID(0);

// use this to test for errors at this point: System.out.println(mediaTracker.isErrorAny());

// determine thumbnail size from WIDTH and HEIGHT

double thumbRatio = (double)thumbWidth / (double)thumbHeight;

int imageWidth = image.getWidth(null);

int imageHeight = image.getHeight(null);

double imageRatio = (double)imageWidth / (double)imageHeight;

if (thumbRatio < imageRatio) {

thumbHeight = (int)(thumbWidth / imageRatio);

} else {

thumbWidth = (int)(thumbHeight \* imageRatio);

}

// draw original image to thumbnail image object and

// scale it to the new size on-the-fly

BufferedImage thumbImage = new BufferedImage(thumbWidth, thumbHeight, BufferedImage.TYPE\_INT\_RGB);

Graphics2D graphics2D = thumbImage.createGraphics();

graphics2D.setRenderingHint(RenderingHints.KEY\_INTERPOLATION, RenderingHints.VALUE\_INTERPOLATION\_BILINEAR);

graphics2D.drawImage(image, 0, 0, thumbWidth, thumbHeight, null);

// save thumbnail image to outFilename

BufferedOutputStream out = new BufferedOutputStream(new FileOutputStream(outFilename));

JPEGImageEncoder encoder = JPEGCodec.createJPEGEncoder(out);

JPEGEncodeParam param = encoder.getDefaultJPEGEncodeParam(thumbImage);

quality = Math.max(0, Math.min(quality, 100));

param.setQuality((float)quality / 100.0f, false);

encoder.setJPEGEncodeParam(param);

encoder.encode(thumbImage);

out.close();

}

# 9. 创建 JSON 格式的数据

并下面这个JAR 文件：json-rpc-1.0.jar (75 kb)

import org.json.JSONObject;

...

...

JSONObject json = new JSONObject();

json.put("city", "Mumbai");

json.put("country", "India");

...

String output = json.toString();

...

# 10. 使用iText JAR生成PDF

import java.io.File;

import java.io.FileOutputStream;

import java.io.OutputStream;

import java.util.Date;

import com.lowagie.text.Document;

import com.lowagie.text.Paragraph;

import com.lowagie.text.pdf.PdfWriter;

public class GeneratePDF {

public static void main(String[] args) {

try {

OutputStream file = new FileOutputStream(new File("C:\\Test.pdf"));

Document document = new Document();

PdfWriter.getInstance(document, file);

document.open();

document.add(new Paragraph("Hello Kiran"));

document.add(new Paragraph(new Date().toString()));

document.close();

file.close();

} catch (Exception e) {

e.printStackTrace();

}

}

}

# 11. HTTP 代理设置

System.getProperties().put("http.proxyHost", "someProxyURL");

System.getProperties().put("http.proxyPort", "someProxyPort");

System.getProperties().put("http.proxyUser", "someUserName");

System.getProperties().put("http.proxyPassword", "somePassword");

# 12. 单实例Singleton 示例

public class SimpleSingleton {

private static SimpleSingleton singleInstance = new SimpleSingleton();

//Marking default constructor private

//to avoid direct instantiation.

private SimpleSingleton() {

}

//Get instance for class SimpleSingleton

public static SimpleSingleton getInstance() {

return singleInstance;

}

}

另一种实现

public enum SimpleSingleton {

INSTANCE;

public void doSomething() {

}

}

//Call the method from Singleton:

SimpleSingleton.INSTANCE.doSomething();

# 13. 抓屏程序

import java.awt.Dimension;

import java.awt.Rectangle;

import java.awt.Robot;

import java.awt.Toolkit;

import java.awt.image.BufferedImage;

import javax.imageio.ImageIO;

import java.io.File;

...

public void captureScreen(String fileName) throws Exception {

Dimension screenSize = Toolkit.getDefaultToolkit().getScreenSize();

Rectangle screenRectangle = new Rectangle(screenSize);

Robot robot = new Robot();

BufferedImage image = robot.createScreenCapture(screenRectangle);

ImageIO.write(image, "png", new File(fileName));

}

...

# 14. 列出文件和目录

File dir = new File("directoryName");

String[] children = dir.list();

if (children == null) {

// Either dir does not exist or is not a directory

} else {

for (int i=0; i < children.length; i++) {

// Get filename of file or directory

String filename = children[i];

}

}

// It is also possible to filter the list of returned files.

// This example does not return any files that start with `.'.

FilenameFilter filter = new FilenameFilter() {

public boolean accept(File dir, String name) {

return !name.startsWith(".");

}

};

children = dir.list(filter);

// The list of files can also be retrieved as File objects

File[] files = dir.listFiles();

// This filter only returns directories

FileFilter fileFilter = new FileFilter() {

public boolean accept(File file) {

return file.isDirectory();

}

};

files = dir.listFiles(fileFilter);

# 15. 创建ZIP和JAR文件

import java.util.zip.\*;

import java.io.\*;

public class ZipIt {

public static void main(String args[]) throws IOException {

if (args.length < 2) {

System.err.println("usage: java ZipIt Zip.zip file1 file2 file3");

System.exit(-1);

}

File zipFile = new File(args[0]);

if (zipFile.exists()) {

System.err.println("Zip file already exists, please try another");

System.exit(-2);

}

FileOutputStream fos = new FileOutputStream(zipFile);

ZipOutputStream zos = new ZipOutputStream(fos);

int bytesRead;

byte[] buffer = new byte[1024];

CRC32 crc = new CRC32();

for (int i=1, n=args.length; i < n; i++) {

String name = args[i];

File file = new File(name);

if (!file.exists()) {

System.err.println("Skipping: " + name);

continue;

}

BufferedInputStream bis = new BufferedInputStream(

new FileInputStream(file));

crc.reset();

while ((bytesRead = bis.read(buffer)) != -1) {

crc.update(buffer, 0, bytesRead);

}

bis.close();

// Reset to beginning of input stream

bis = new BufferedInputStream(

new FileInputStream(file));

ZipEntry entry = new ZipEntry(name);

entry.setMethod(ZipEntry.STORED);

entry.setCompressedSize(file.length());

entry.setSize(file.length());

entry.setCrc(crc.getValue());

zos.putNextEntry(entry);

while ((bytesRead = bis.read(buffer)) != -1) {

zos.write(buffer, 0, bytesRead);

}

bis.close();

}

zos.close();

}

}

# 16. 解析/读取XML 文件

XML文件

<?xml version="1.0"?>

<students>

<student>

<name>John</name>

<grade>B</grade>

<age>12</age>

</student>

<student>

<name>Mary</name>

<grade>A</grade>

<age>11</age>

</student>

<student>

<name>Simon</name>

<grade>A</grade>

<age>18</age>

</student>

</students>

Java代码

package net.viralpatel.java.xmlparser;

import java.io.File;

import javax.xml.parsers.DocumentBuilder;

import javax.xml.parsers.DocumentBuilderFactory;

import org.w3c.dom.Document;

import org.w3c.dom.Element;

import org.w3c.dom.Node;

import org.w3c.dom.NodeList;

public class XMLParser {

public void getAllUserNames(String fileName) {

try {

DocumentBuilderFactory dbf = DocumentBuilderFactory.newInstance();

DocumentBuilder db = dbf.newDocumentBuilder();

File file = new File(fileName);

if (file.exists()) {

Document doc = db.parse(file);

Element docEle = doc.getDocumentElement();

// Print root element of the document

System.out.println("Root element of the document: "

+ docEle.getNodeName());

NodeList studentList = docEle.getElementsByTagName("student");

// Print total student elements in document

System.out

.println("Total students: " + studentList.getLength());

if (studentList != null && studentList.getLength() > 0) {

for (int i = 0; i < studentList.getLength(); i++) {

Node node = studentList.item(i);

if (node.getNodeType() == Node.ELEMENT\_NODE) {

System.out

.println("=====================");

Element e = (Element) node;

NodeList nodeList = e.getElementsByTagName("name");

System.out.println("Name: "

+ nodeList.item(0).getChildNodes().item(0)

.getNodeValue());

nodeList = e.getElementsByTagName("grade");

System.out.println("Grade: "

+ nodeList.item(0).getChildNodes().item(0)

.getNodeValue());

nodeList = e.getElementsByTagName("age");

System.out.println("Age: "

+ nodeList.item(0).getChildNodes().item(0)

.getNodeValue());

}

}

} else {

System.exit(1);

}

}

} catch (Exception e) {

System.out.println(e);

}

}

public static void main(String[] args) {

XMLParser parser = new XMLParser();

parser.getAllUserNames("c:\\test.xml");

}

}

# 17. 把 Array 转换成 Map

import java.util.Map;

import org.apache.commons.lang.ArrayUtils;

public class Main {

public static void main(String[] args) {

String[][] countries = { { "United States", "New York" }, { "United Kingdom", "London" },

{ "Netherland", "Amsterdam" }, { "Japan", "Tokyo" }, { "France", "Paris" } };

Map countryCapitals = ArrayUtils.toMap(countries);

System.out.println("Capital of Japan is " + countryCapitals.get("Japan"));

System.out.println("Capital of France is " + countryCapitals.get("France"));

}

}

# 18. 发送邮件

import javax.mail.\*;

import javax.mail.internet.\*;

import java.util.\*;

public void postMail( String recipients[ ], String subject, String message , String from) throws MessagingException

{

boolean debug = false;

//Set the host smtp address

Properties props = new Properties();

props.put("mail.smtp.host", "smtp.example.com");

// create some properties and get the default Session

Session session = Session.getDefaultInstance(props, null);

session.setDebug(debug);

// create a message

Message msg = new MimeMessage(session);

// set the from and to address

InternetAddress addressFrom = new InternetAddress(from);

msg.setFrom(addressFrom);

InternetAddress[] addressTo = new InternetAddress[recipients.length];

for (int i = 0; i < recipients.length; i++)

{

addressTo[i] = new InternetAddress(recipients[i]);

}

msg.setRecipients(Message.RecipientType.TO, addressTo);

// Optional : You can also set your custom headers in the Email if you Want

msg.addHeader("MyHeaderName", "myHeaderValue");

// Setting the Subject and Content Type

msg.setSubject(subject);

msg.setContent(message, "text/plain");

Transport.send(msg);

}

# 19. 发送代数据的HTTP 请求

import java.io.BufferedReader;

import java.io.InputStreamReader;

import java.net.URL;

public class Main {

public static void main(String[] args) {

try {

URL my\_url = new URL("http://coolshell.cn/");

BufferedReader br = new BufferedReader(new InputStreamReader(my\_url.openStream()));

String strTemp = "";

while(null != (strTemp = br.readLine())){

System.out.println(strTemp);

}

} catch (Exception ex) {

ex.printStackTrace();

}

}

}

# 20. 改变数组的大小

/\*\*

\* Reallocates an array with a new size, and copies the contents

\* of the old array to the new array.

\* @param oldArray the old array, to be reallocated.

\* @param newSize the new array size.

\* @return A new array with the same contents.

\*/

private static Object resizeArray (Object oldArray, int newSize) {

int oldSize = java.lang.reflect.Array.getLength(oldArray);

Class elementType = oldArray.getClass().getComponentType();

Object newArray = java.lang.reflect.Array.newInstance(

elementType,newSize);

int preserveLength = Math.min(oldSize,newSize);

if (preserveLength > 0)

System.arraycopy (oldArray,0,newArray,0,preserveLength);

return newArray;

}

// Test routine for resizeArray().

public static void main (String[] args) {

int[] a = {1,2,3};

a = (int[])resizeArray(a,5);

a[3] = 4;

a[4] = 5;

for (int i=0; i<a.length; i++)

System.out.println (a[i]);

}