

# Java应用技术 Homework1

## 基本信息

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- 作业日期：2023.09.21

## 作业要求

- 完成Java环境配置
- 完成10进制向16进制转换的Java程序

## 作业内容

### Java环境配置

参考[这篇文章](#)和[这篇文章](#)，选用VS Code进行配置。

- 在[Oracle Java SE](#)下载JDK并安装

The screenshot shows the Oracle Java SE download page for JDK 21. The page header includes the Oracle logo and navigation links for Products, Industries, Resources, Customers, Partners, Developers, and Company. Below the header, there are tabs for Java downloads, Tools and resources, and Java archive. The main content area is titled "Java 21 and Java 17 available now" and includes a link to "Learn about Java SE Subscription". Below this, there are links for JDK 21, JDK 17, GraalVM for JDK 21, and GraalVM for JDK 17. The "JDK Development Kit 21 downloads" section provides information about the JDK 21 binaries, including their availability under the Oracle No-Fee Terms and Conditions (NFTC) and the Java SE OTN License. A table lists the download links for the x64 Compressed Archive, x64 Installer, and x64 MSI Installer for Windows. The table has three columns: Product/file description, File size, and Download. The download links are provided for each product.

Product/file description	File size	Download
x64 Compressed Archive	180.99 MB	<a href="https://download.oracle.com/java/21/latest/jdk-21_windows-x64_bin.zip">https://download.oracle.com/java/21/latest/jdk-21_windows-x64_bin.zip</a> (sha256)
x64 Installer	160.12 MB	<a href="https://download.oracle.com/java/21/latest/jdk-21_windows-x64_bin.exe">https://download.oracle.com/java/21/latest/jdk-21_windows-x64_bin.exe</a> (sha256)
x64 MSI Installer	158.90 MB	<a href="https://download.oracle.com/java/21/latest/jdk-21_windows-x64_bin.msi">https://download.oracle.com/java/21/latest/jdk-21_windows-x64_bin.msi</a> (sha256)



- 在VS Code中安装以下扩展
  - Language Support for Java™ by Red Hat
  - Debugger for Java
  - Java Test Runner
  - Maven for Java
  - Project Manager for Java
- 配置系统环境变量

```
1 JAVA_HOME = C:\Program Files\Java\jdk-21
2 PATH <- %JAVA_HOME%\bin
3 PATH <- %JAVA_HOME%\jre\bin
```

至此，已完成VS Code上的Java环境配置。

## 第一个Java程序

以下程序实现了由10进制向16进制的转换。

```
1 import java.util.Scanner;
2
3 public class DEctoHEX {
4     public static void main(String[] args) throws Exception {
5         System.out.print("Input a number in DEC: ");
6         Scanner scan = new Scanner(System.in);
7         if (scan.hasNextInt()) {
8             int dec = scan.nextInt();
9             String hex = "";
```

```

10         if (dec == 0)
11             hex = "0";
12         else {
13             boolean flag = (dec < 0);
14             if (flag)
15                 dec = -dec;
16             while (dec != 0) {
17                 int digit = dec % 16;
18                 if (digit < 10)
19                     hex = digit + hex;
20                 else
21                     hex = (char) ('A' + digit - 10) + hex;
22                 dec = dec / 16;
23             }
24             if (flag)
25                 hex = "-" + hex;
26         }
27         System.out.println(hex);
28     }
29     scan.close();
30 }
31 }

```

输出结果如图示：

```

● PS E:\Java> java DEctoHEX.java
Input a number in DEC: 20230921
134B309

```