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**Question 1**

This program runs a for loop incrementing integers by 1 from 0-256.

The values between 0 and 256 are converted to binary and to hexadecimal and displays them in table format.

The user can view the whole table (decimal, binary and hexadecimal), or they can choose the conversions that they would like to be output.

**CODE**

package conversion;

import java.util.\*;

public class Conversion {

public static void main(String[] args) {

System.out.println("Choose the conversion you would like:");

System.out.println("1 = Decimal to Binary\n2 = Decimal to Hexadecial\n3 = Decimal, Binary, Hexadecimal");

Scanner s = new Scanner(System.in);

Formatter f = new Formatter();

switch(s.nextLine())

{

case "1":

f.format("%15s %15s\n","Decimal","Binary");

for(int i = 0;i<=256;i++)

{

String binary = Integer.toBinaryString(i);

f.format("%15s",i);

f.format("%15s\n", binary);

}

System.out.println(f);

break;

case "2":

f.format("%15s %15s\n","Decimal","Hexadecimal");

for(int i = 0;i<257;i++)

{

String hex = Integer.toHexString(i);

f.format("%15s",i);

f.format("%15s\n", hex);

}

System.out.println(f);

break;

case "3":

f.format("%15s %15s %15s\n","Decimal","Binary","Hexadecimal");

for(int i = 0;i<257;i++)

{

String binary = Integer.toBinaryString(i);

String hex = Integer.toHexString(i);

f.format("%15s",i);

f.format("%15s", binary);

f.format("%15s\n", hex);

}

System.out.println(f);

break;

}

}

}

**CITATIONS**

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| --- | --- |
| Article title: | Convert Decimal fraction to binary in Java - CodeSpeedy |
| Website title: | CodeSpeedy |
| URL: | https://www.codespeedy.com/convert-decimal-fraction-to-binary-in-java/ |

|  |  |
| --- | --- |
| Article title: | Split() String method in Java with examples - GeeksforGeeks |
| Website title: | GeeksforGeeks |
| URL: | https://www.geeksforgeeks.org/split-string-java-examples/ |

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| --- | --- |
| Author | How Java |
| Article title: | How to split a string in Java |
| Website title: | Stack Overflow |
| URL: | https://stackoverflow.com/questions/3481828/how-to-split-a-string-in-java |