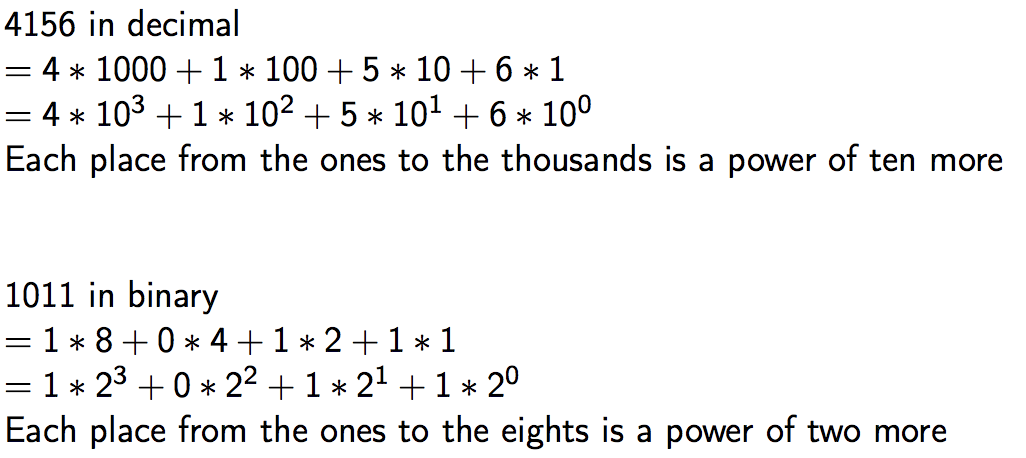
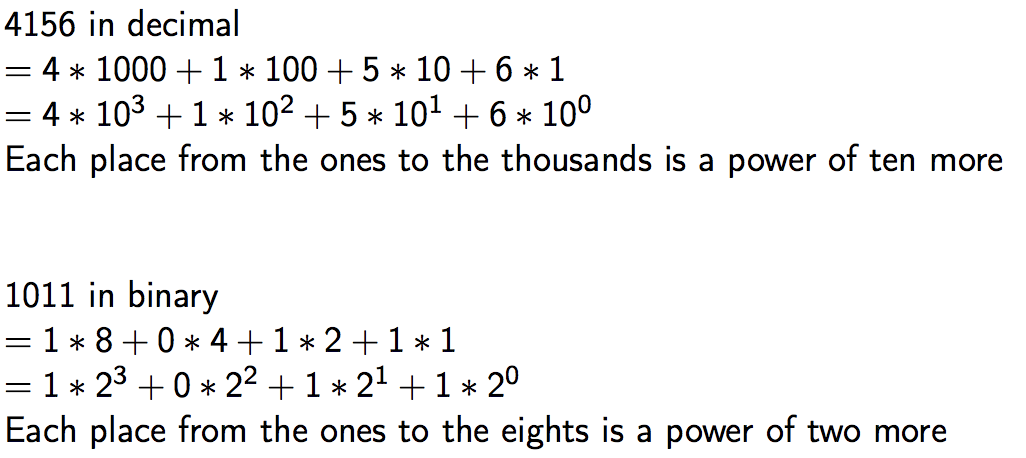
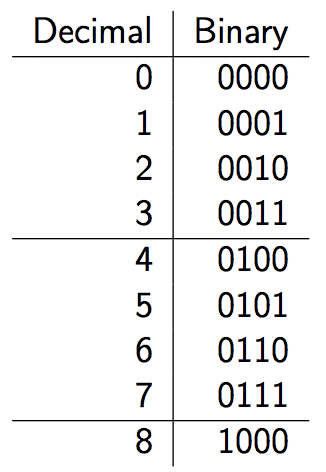
Binary

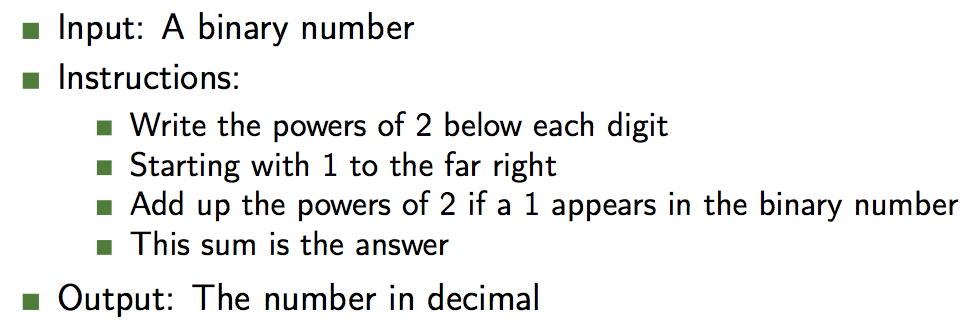
In binary (base 2), we use powers of two instead of tens to represent numbers.



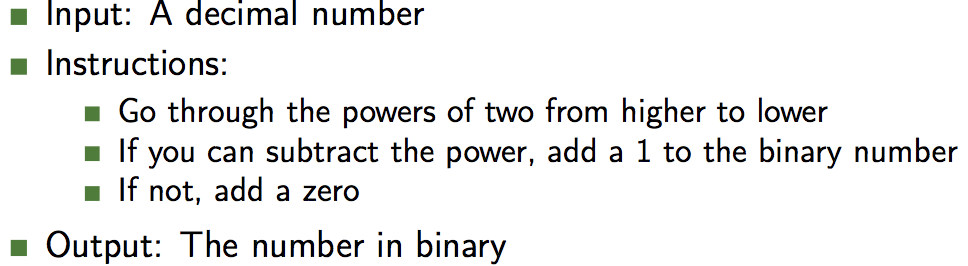




binary-to-decimal

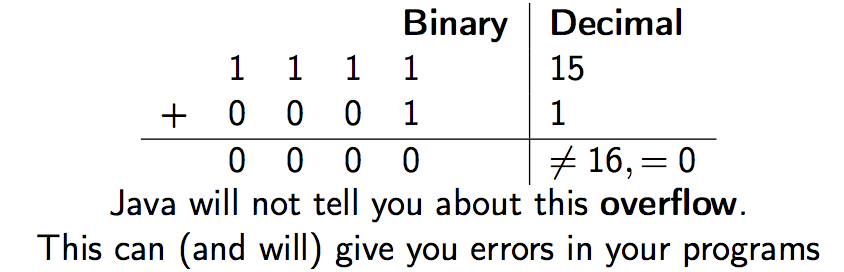


decimal-to-binary



addition

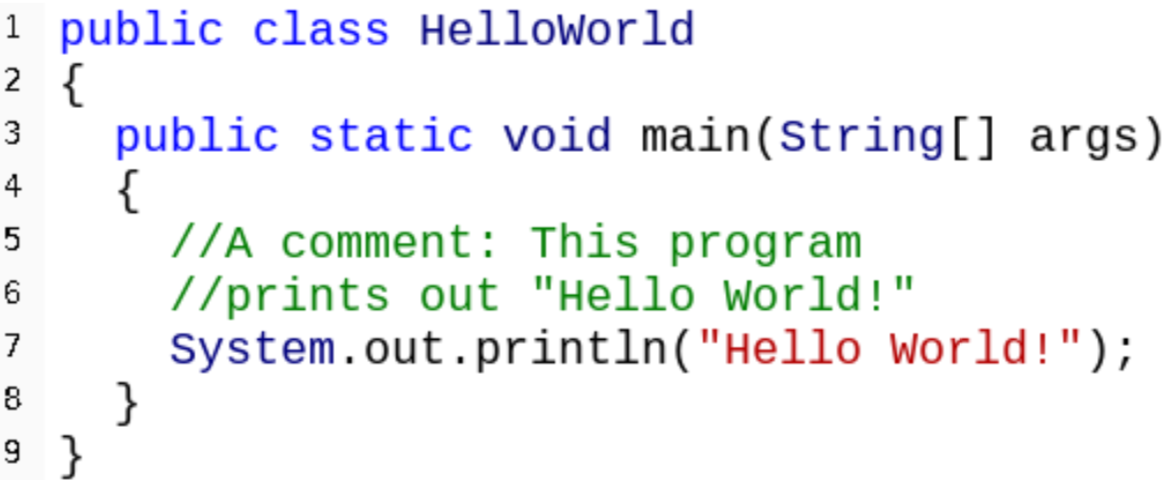
To add binary, just perform normal addition, but instead of carrying the one at 10, carry it at 2.

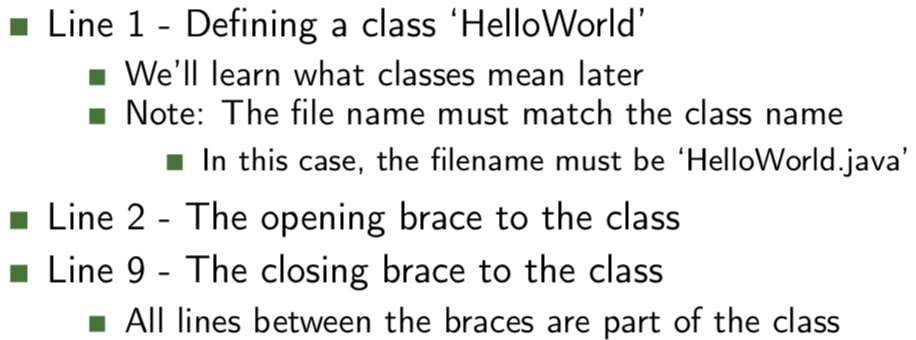


Letters in Java are called **characters**. These characters must also be represented in binary.

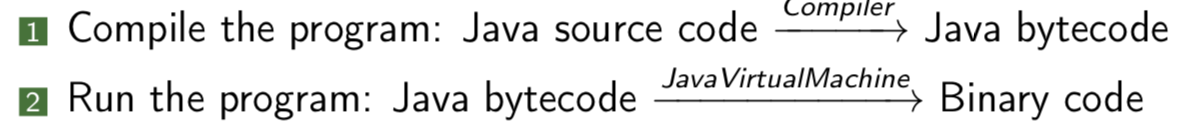
Java maps each character to a number, and automatically converts when needed. *(ASCII table)*

*nstead of looking at binary, much easier to look at hexadecimal. Hexadecimal is base 16: 0-9, A-F to represent 0-1.*





Two steps in Java



camelcase used in java----expensiveChairPrice

snake-case used in Python----expensive\_chair\_price