Binary in Scala

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Binary

Write a program that will convert a binary number, represented as a string (e.g. '101010'), to its decimal equivalent using first principles

Implement binary to decimal conversion. Given a binary input string, your program should produce a decimal output. The program should handle invalid inputs.

Note

- Implement the conversion yourself. Do not use something else to perform the conversion for you.

About Binary (Base-2)

Decimal is a base-10 system.

A number 23 in base 10 notation can be understood as a linear combination of powers of 10:

- The rightmost digit gets multiplied by $10^0 = 1$
- The next number gets multiplied by $10^1 = 10$
- ...
- The *n*th number gets multiplied by 10*^(n-1)*.
- All these values are summed.

So: `23 => 2*10^1 + 3*10^0 => 2*10 + 3*1 = 23 base 10`

Binary is similar, but uses powers of 2 rather than powers of 10.

So: `101 => 1*2^2 + 0*2^1 + 1*2^0 => 1*4 + 0*2 + 1*1 => 4 + 1 => 5 base 10.`

The Scala exercises assume an SBT project scheme. The exercise solution source should be placed within the exercise directory/src/main/scala. The exercise unit tests can be found within the exercise directory/src/test/scala.

To run the tests simply run the command `sbt test` in the exercise directory.

Beta

For more detailed info about the Scala track see the help page (http://help.exercism.io/getting-started-with-scala.html).

Source

All of Computer Science view source (http://www.wolframalpha.com/input/?i=binary&a=*C.binary-_*MathWorld-)

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