What are Haskell's case rules?

Variables begin with a lowercase letter.

Type names begin with an uppercase letter.

CIS 554 Haskell

Give the comment syntax.

-- comment out the rest of the line.

```
{- multiline comment -}
(nesting is allowed)
```

Haskell

Describe Haskell's Boolean types?

True and False are of type Bool.

The type is strict, only admitting those two literals.

What are the Boolean operators?

Equality/Inequality?

&&, ||, not

'==` and `/=`

Haskell's math operators have types that are ...

Haskell

... strict, since there's no coercion. They have integer and floating point versions.

Haskell

Convert Float to Int.



Haskell

Convert a Char to an Int and back.

ord :: Char -> Int chr :: Int -> Char

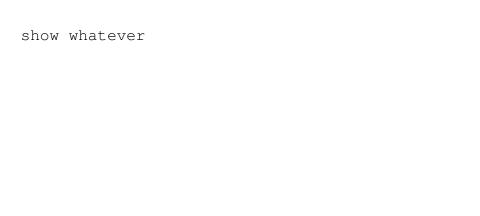
Haskell

What is a string, really?

## A list of Chars, that is, [Char].

CIS 554 Haskell

Get string representations of objects.



Make a prefix operator infix.

Make an infix operator prefix.

Surrounding an identifier with back ticks makes it infix.

Surrounding an operator with parens makes it prefix.

Haskell

Index a list.

Test for membership.

```
ghci> ['a', 'b', 'c'] !! 0
'a'
elem, notElem
```

1

Remove duplicates in a list.

Haskell

Concatenate two lists.

nub

concat

Access the elements of a 2-tuple.

fst, snd

Haskell

What is the range syntax?

[a..b] is a list of all the values from a to b, inclusive.

[a..] is an infinite list from a up.

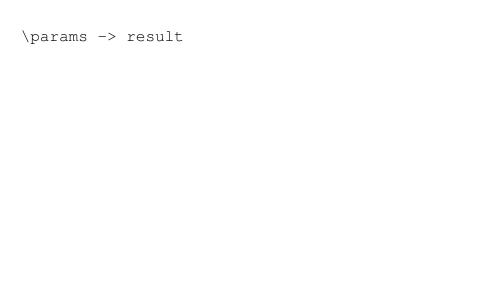
CIS 554 Haskell

What is the syntax of list comprehensions?

[expr | generatorOrGuard1, ..., generatorOrGuardN]

Guards are just expressions that result in Bool. No if is used.

## How are lambdas written?



CIS 554 Haskell

How are new variables introduced?

expression where declarations

let declarations in expressions

The expression can have multiple new variables in it.

CIS 554 Haskell

How are case expressions introduced?

```
case expr1 of
  expr2 -> ...
  expr3 -> ...
```

How are function guards introduced?

Haskell

```
func params =
  | boolean1 -> ...
  | boolean2 -> ...
```