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What is Haskell?

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Haskell Fundamentals, Part 1

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Overview

- What is Haskell?
- Why Should I Learn Haskell?
- History
- Tools

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What is Haskell?

Haskell is a purely functional, lazy, statically typed programming language.

- Purely Functional
 - Functions are values
 - Values never change
- Lazy
- Statically Typed

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Why Should I Learn Haskell?

- Not Difficult, just Different

Why Should I Learn Haskell?

- C –Engineering
- Java/C# –Business
- Haskell –Mathematics
 - Patient development
 - Strong theoretical roots
 - Fosters innovation

Why Should I Learn Haskell?

- Industrial Strength
- Performance
- Libraries

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History

- 1980s –Many functional programming languages
- 1987 –Standardization committee formed
- 1990 –Haskell 1.0
- 1997 –Haskell 98
- 2009 –Haskell 2010

History

- Many Compilers
- Glorious Glasgow Haskell Compilation System (GHC)
 - Most Popular
 - Many Features

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Tools

- Haskell Platform
 - www.haskell.org

Tools

- GHCi
 - Haskell Read, Evaluate, Print Loop (REPL)

Tools

Editor

- Text Editor
 - Sublime, Vim, Notepad++, Emacs, etc.
- IDE
 - EclipseFP (eclipsefp.github.io)
 - Leksah (www.leksah.org)

Tools

GHCi:

```
GHCi> let x = 3
```

```
GHCi> let y = 7
```

```
GHCi> x + y
```

```
Result: 10
```

Haskell Source File (.hs):

```
string1 = "hello"
```

```
string2 = "world"
```

```
greeting = string1 ++ " " ++ string2
```

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