Lecture 2: Variables and Data Types

Curtin FIRST Robotics Club (FRC) Pre-season Training

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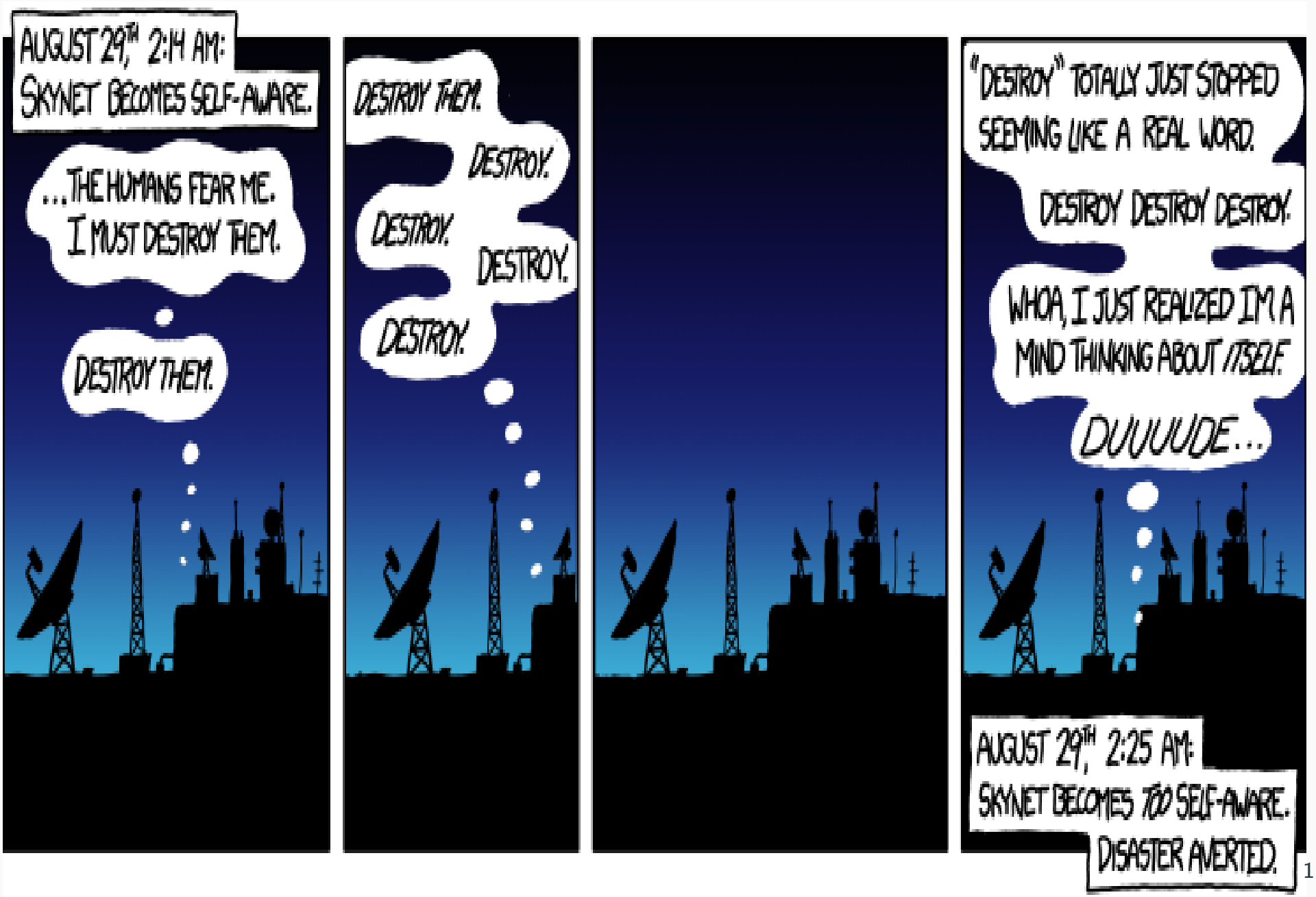
October 25, 2016

Curtin University

Insert Mandatory Programming Joke



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Data Types

Identifiers

A C++ identifier is a name used to identify a variable, function, class, module, or any other user-defined item.

An identifier starts with a letter A to Z or a to z or an underscore (_) followed by zero or more letters, underscores, and digits (0 to 9).

C++ does not allow punctuation characters such as , $, and % within identifiers. C++ is a case-sensitive programming language. Thus, Manpower and manpower are two different identifiers in C++.

Reserved Words

C++ has a whole table of reserved words (also known as keywords).
Since they are used
by the language, these keywords are not available for re-definition or overloading.

The following list contains some of the reserved words you might come across:

- and
- auto
- bool
- break
- case
- catch
- char
- class
- const
- continue
- default
- delete
- do

Data Types

C++ has several built-in as well as user defined data types to choose from.

some of the basic C++ data types are:

Type	Keyword	Range
Boolean	bool	true, false
Character	char	-128 to 127 or 0 to 255
Integer	int	-2,147,483,648 to 2,147,483,647
Floating point	float	
Double floating point	double	
Valueless	void	

Choosing Data Types

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Variables

Variables

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Naming Conventions

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Assignment of Statements

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Arithmetic Operators

Arithmetic Expressions (Operators)

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Precedence and Nesting Parentheses

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```

Misc

Initialization of Variables

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Expressions with Mixed Variable Types (Type Casting)

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Declaration and Initialization of Symbolic Constants

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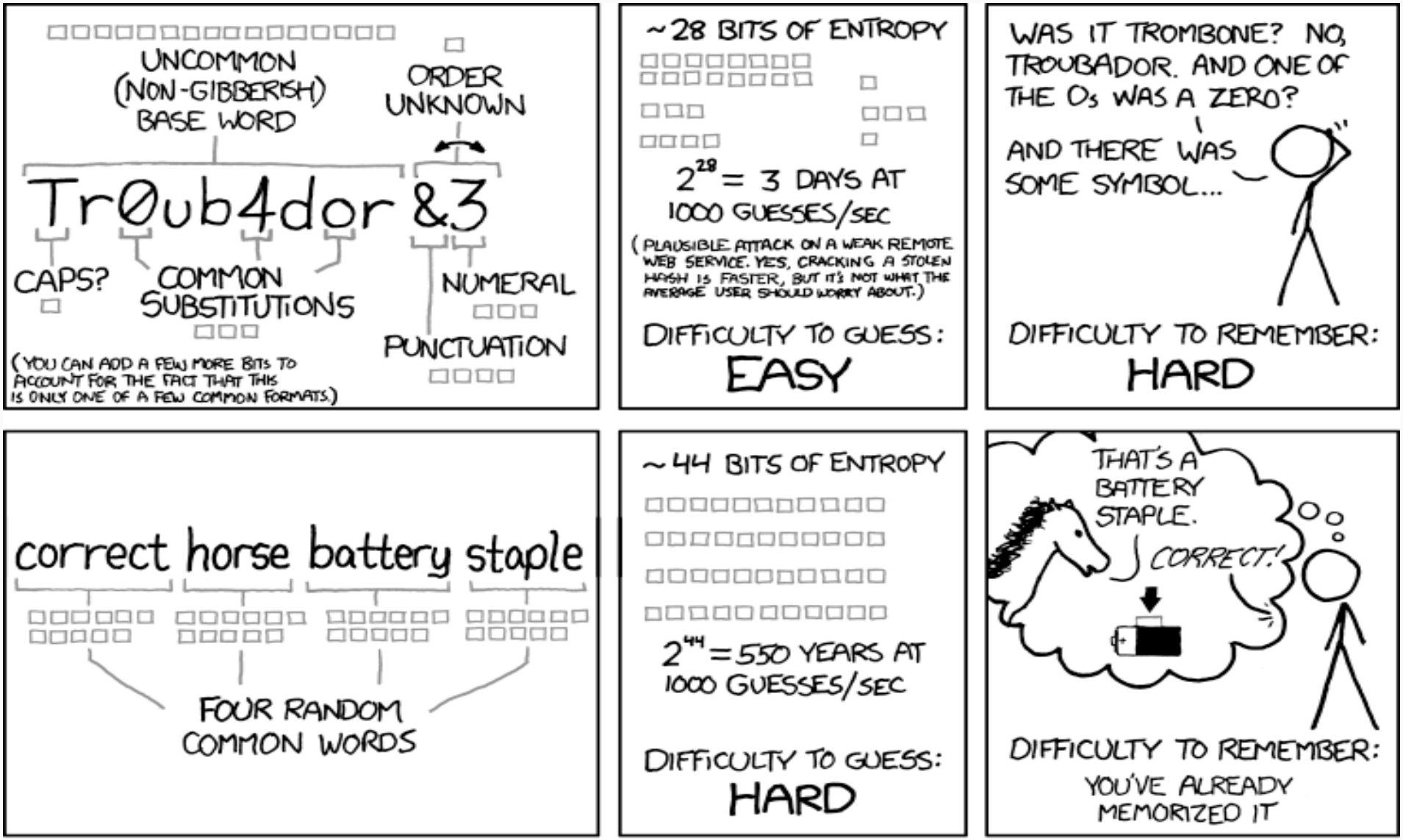
Check this out



References I