

## **Cryptol: Data Structures**

**Description** As with other languages a user can create their own data types. This lesson

shows how that can be done. This is only an introduction an does not show

some advanced uses of user-defined data types.

**Purpose** User-defined data types facilitate expressibility and support faster and more

accurate prototyping.

**Audience** This module is intended for:

1 The general public

2 K-12 and college classes on cyber defense

3 preparation for proficiency in the use of tools and a computing environment

suitable for the study of cyber defense

**Objectives** After completing the module:

1 The learner will know how to create user-defined data types

2 The learner will know about some of the built-in data types such as Float

3 The learner will have some experience in choosing a user-defined data type

**Keywords** type, Float, Rational, property, fox corn chicken puzzle, BMI calculator, Circle,

area

**Category** cybersecurity > education

**Delivery** java applets and written documentation in pdf format

**Team** John Franco and Ethan Link

**Assessment** The applets provide the means for experimentation. Questions are asked in the

documentation that help with the set up of experiments. The ideas that learners

come up with is evidence that the module was successful.

**Workflow** No particular schedule was established

**Environment** All materials are contained in a single jar file. The jar file can be run on any

computer where java version 14 or higher and some pdf reader such as acroread

or evince are available. The jar file may be executed in the cyber range or learners may download the jar file (which is considered to be an executable file)

and run it on their personal computers.