# Variables, data types, statements, & expressions

Site: <u>TMT Bangladesh</u>

Course: Introduction to Scientific Programming

Book: Variables, data types, statements, & expressions

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Description

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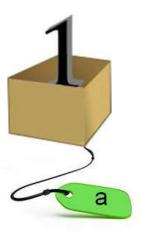
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### Variables

A variable is like a labeled box that can store values. Defining variables and giving them proper names is essential to make your program readable.



For instance,

### >> a = 1

This can be read as "a is a variable that holds the value 1" or "assign the value 1 to variable a".

# Expressions

An expression is a combination of operands and operators. Operands can be literals or variables.

An example of an expression is:

### Data Types

Data types are used to specify the category of data objects. Python has inbuilt basic object types for:

- numbers (type can be *integer* or *float*)
- text (type is a **string**)
- truth values (type is **boolean**)

Most programming languages like C++, Java, etc require the programmer to declare the type of variables. However, Python is a dynamically typed language, meaning you don't have to specify the data type of your variables. The Python interpreter infers what is the type of each expression.

### Presentations and Exercises

### **Recorded Lectures**

- <u>Variables & Data types</u>
- Statements & expressions

### Presentations

• SL ISC 02 variables and data types

### Exercises

• Exercise ISC P02 Variables datatypes statements and expressions