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Visual Basic

Variables and Constants

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Variables and Constants

Variables

Variables are used to store information.

Visual Basic provides several different variable types.

The type that you use depends on the kind of data you want to store.

Listed below are the most common variable types:

Integer

An integer variable is used for storing whole number values (values with no decimal component).

Can store values between -32,768 and 32,767

Long

Same as integer, but can store bigger numbers. The trade-off is that they use more memory.

Can store values between -2,147,483,648 and 2,147,483,647

Single

Stores numbers that contain a decimal part.

Can store values between -3.402823E+38 to -1.401298E-45 for negative values, 1.401298E-45 to 3.402823E+38 for positive values

Double

Same as single, but can store bigger numbers. The trade-off is that they use more memory.

String

A String variable is used for storing character, rather than numeric, data.

Boolean

A Boolean variable can only contain one of two values: True or False.

Constants

Constants are different from variables in the sense that their values do not change during the running of the program.

Naming Variables and Constants

- Variable names must begin with a letter.
- Variable names may contain letters, numbers and the underscore character.
- Variable names may not contain spaces or punctuation.
- Variable names may not exceed 255 characters.
- You may not use a Visual Basic reserve word (ie. caption) as a variable name.

Declaring Variables and Constants

Variables are declared in using the **Dim** statement.

Constants are declared in using the **Const** statement.

This can be done within a method (for variables used only in that method) or in **Form1 | Declarations** for variables that can be accessed from any method.



Examples:

```
Dim cost As Single
```

```
Dim customer_name As String
```

```
Dim application_processed as Boolean
```

```
Const Pi As Single = 3.14159
```

Variables and Constants Exercises

Name

Date

Variables are declared in the _____ | _____ section.

State four rules for naming variables (and constants)

State the type of variable type used to store ...

Note: Whole numbers means the number has no decimal component

... whole number values between -32,768 and 32,767

... whole number values between -2,147,483,648 and 2,147,483,647.

... decimal number values _____ or

... character data

... the values **True** or **False**

What type of variable is required to store the following ...

... the number of pages the user wants to print

Dim numpages As

... a customer's age

Dim age As

... a customer's name

Dim customername As

... the year the user was born in

Dim year_of_birth As

... the balance in a bank account

Dim balance As

... whether or not the customer has a driver's license

Dim license As

... the weight of a train container (max. 45000 kg)

Dim freight As
