Sub Procedures I

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Sub Procedure

• A *Sub procedure* is a part of a program that performs one or more related tasks, has its own name, and is written as a separate part of the program.

• The simplest Sub has the form

```vba
Private Sub ProcedureName()  
    statement(s)  
End Sub
```
Invoking Sub Procedures

- A Sub procedure is called (invoked) with a statement of the form

\[
\text{Call } \text{ProcedureName}
\]
Naming Sub Procedures

• The rules for naming general procedures are identical to the rules for naming variables. I.e., the general procedure names can be up to 255 characters long, must begin with a letter, and can consist only of letters, digits, and underscores. The name chosen for a Sub procedure should describe the task it performs.
Typing Sub Procedures

A. Type directly into the Code window, or
B. Type into a template created as follows:
   1. Press Alt/T/P or select Add Procedure from the Tools menu.
   2. Type in the name of the procedure.
   3. Select Sub from the Type box.
   4. Select Private from the Scope box.
   5. Press the Enter key or click on OK.
Parameters and Arguments

- *Parameters* are temporary placeholders for the numbers passed to the Sub procedure when it’s called.

  ```vba
  Private Sub Add(num1 As Single, num2 As Single)
    picResult.Print “The sum of”; num1; “and”; num2; “is”; num1+num2
  End Sub
  ```

Sub procedure Add can be called as follows:

  ```vba
  Call Add(4,x-5)
  ```

Items in the parentheses of a Call statement are called *arguments*. They can be variables or expressions.
Modular or Top-Down Design

Main module

Level 1

Level 2

Level 3