**Class 14 User-Defined Functions**

**Key Ideas**

* You can write your own functions, called user-defined functions
* When you write a function, you write the function definition
* The function definition consists of the function header, a doc string, and the function body
* The header consists of the reserved word def, the name of the function, the parameters in parentheses, and then a colon
* The doc string describes what the function does
* When calling the function, the name of the function is given and then arguments that are passed to the function in parentheses
* The arguments in the function call are passed to the parameters in the function header
* The arguments are sometimes called actual parameters
* The parameters are sometimes called formal parameters
* User-defined functions can be stored in user-defined modules
* There are functions that calculate and return value(s)
* There are functions that accomplish a task
* Functions with no return statement by default return None
* When a function is called, control is sent to the function
* Functions enable modular programming
* The scope of a variable or object is where the object is valid
* Variables and parameters defined in a function are local to that function, and are only valid in the function
* Multiple values can be returned from a function by putting them into a data structure such as a tuple
* Lambda functions are short one line functions

**Built-ins**

**Key words**

**def**: define a function

**lambda**: defines an anonymous function

**Statements**

**return**: returns value(s) from a function

**Operators**

“””doc string””” triple quotes for a doc string

**Assessment Questions**

Which of the following are true statements? Check all that apply.

* You cannot write your own functions. (F)
* The **return** statement is used to return values from a function (T)
* Functions that do not have a return statement still return a value (T)
* After a function has been defined, all of the variables created in the function are available to be used outside of the function (F)

**T**/F: Lambda functions are simple one-line functions