

Lesson 3: Methods and Data

WHOLENESS OF THE LESSON

Many programs are like recipes -- a sequence of steps to create a result. The steps are the pieces of program code that are executed to achieve a result. In programming, we create methods or functions to implement the steps of action to achieve the result. We also need to remember things so we can refer to them again, so we have data stored in variables. Methods and data are like knowledge and memory, both are needed to accomplish any goal.

MAIN POINTS

1. We add methods to objects to define new behaviors.
2. We can use methods to organize and manage a larger action by dividing the large action into smaller steps and put each step into a separate method. This subdivision makes it easier to reuse common steps in more places.
3. Naming things is essential in programming -- we name something so we can refer to it again. Variables are used for naming things. Variables have different scope; variables have type. Each object that is added to the world is assigned to a variable.
4. Variables that are defined inside a method can only be used within the method. This is an example of local scope, an important concept in programming.
5. A function is a method that returns a value that can be used in another method.
6. Methods (and functions) can accept parameters that provide information that is needed to implement the method's purpose.