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8.02 Programming Styles Essay

Programming was a relatively recent development in the scope of modern history. At the time of its invention, it was quite inefficient, as computers were the size of rooms, and programmers had to individually enter a stack of “punch cards” to run their code. It was only until the development of high-level languages such as Java that programming became a truly powerful tool, and programmers began to develop different techniques to organize and write their code. Three of the most common coding techniques are compared below: while they all accomplish the same task, the methods for doing so are vastly different.

The first example code shows a simple, elementary approach: it uses a main method to directly print the classic “Hello World!” statement to the screen. There are no other methods used, and no objects or variable are declared. While this method is very simple to code, it has little to no reusability, and no visible organizational structure or flow of control. However, this coding style is probably appropriate for this project, as the task is very simple, and is not part of a larger whole.

For larger projects, programmers needed to break up large tasks into individual reusable functions, to aid in the code’s organization and readability. This approach was known as procedural programming, and can be seen in the second example. A method called “printTwoLines” is declared to print the hello world statement, and it is later called by the main method. In contrast to the previous elementary coding style, this “printTwoLines” method can be reused in future programs, and the main method is less cluttered.

As programming began to see more use with solving problems in the real world, many coders wanted a way to create “objects” in their code, to simulate objects in real life. The developers of Java addressed this problem, and they implemented the Object-Oriented Programming paradigm into the Java language. This approach can be seen in the third example, as a “hello” object is created from the HelloWorldV3 class, and it then invokes the printTwoLines method to print the message to the screen. Unlike the two previous approaches, it also contains a “default constructor” after the class declaration.

So far, I feel like the procedural programming style offers the best blend of code length and value. Using an object for such a menial task doesn’t seem like an efficient approach, and it seemed alien to me, as I am much more familiar with the procedural approach. However, as I begin to discover the uses of objects, I have a feeling I will begin to appreciate the value of Object-Oriented Programming. As I have seen before in this course, things that may seem like a waste of time and code may have hidden benefits later on!