Problem Set 5, Problem 0

Put your response to the reading below.
IMPORTANT: Your entire response should fit on this page.

1. *In her paper, Hopper lists two drawbacks of "using subroutines" (i.e., of abstracting sequences of instructions into reusable functions). Do you think those drawbacks still exist? How important are they today?*
2. *Hopper also lists five advantages of using subroutines, but her list is not comprehensive. Explain at least one advantage of a high-level language that Hopper did not mention in her paper. This may be an idea of your own, or you might take one from those mentioned in the biographical sketch of Hopper, since she continued to expand her arguments for such languages as her career progressed!*

In the article of Hopper in 1952, she was stating about the advantage of reusable function and how to produce better subroutines faster. In the article, she mentioned five advantage, one big disadvantage, and one small disadvantage. Two drawbacks of "using subroutines" are first, because of standardization, a small amount of time is lost in performing duplicate data transfers which could be eliminated in a tailor-made routine. In this case, in the base load problems, this could become serious. The second disadvantage is that if the desired subroutine does not exist, it must be programmed and added to the library. I think those drawbacks do not exist anymore. Today, after 50 years from that article, we improved so much technical development, the fitness to different functions when they duplicate the reusable function is not a huge problem anymore. And also, when for the reusable function duplication, the output and input have a large variety. We can modify the input and output variety now with better technic. Also now, for the correctness of the function, it is better to use the reusable function. Since now, the computer developed so much and we have so many choices of hardware. The one universal advantage of the high-level language, which is computer language such as Python, C, Java is that we can use those codes in any hardware no matter laptop, desktop, or even supercomputer.