Programming Languages

1. Why did we move from punch cards to programming languages? What does that tell you about the purpose of programming languages?

   Mainly due to the fact that programming languages had become so extensive that punch cards were unable to handle all the data without becoming impractical. For the data we have, we would need a high number of punch cards to keep track of it. They would also be quite difficult for a normal reader to interpret – lots of small holes in a card isn't exactly user-friendly Therefore, programming languages (especially those like python) were developed to be much more user-friendly and easier to understand.

2. There are hundreds of different programming languages out there. Why do you think we need so many?

   For some beginners, more user-friendly programming languages such as Python seem to be a great starting point. In addition to this, programming languages have been adapted for a multitude of different tasks. While one program could be suited for one task, another one could be more well-suited for the other

3. What are some drawbacks of a programming language you use? How would you like it to be different? Think of specific examples.

   As a user of python, I believe one drawback to be some of the mathematical operations that may cause confusion. A specific example being the use of modulus (%) function or integer division (//) with negative numbers – rules that are somewhat different from normal, everyday math.

4. If you were going to create a new programming language, how would you start? What do you need to define?

   As it seems to be consistently important and enforced through programming languages, I believe that rules – such as syntax rules and logical rules – must be defined first. Also, pre-defined names like "print" to print in python (i.e., names that we cannot use for variables) must be defined too.

Some Links for more information:

https://www.computerscience.org/resources/computer-programming-languages/

https://www.kdnuggets.com/2021/05/top-programming-languages.html

https://www.monster.com/career-advice/article/programming-languages-you-should-know