Week5 Paper Summary———Monad

By Yi Zhou

This week's paper aims to solve such a problem that how to add interaction to a pure functional language. The author introduces us to a brand new method called monad and use Descartes's musings to make such conception more understandable.

Although, the author of this week's paper is also the one of week3's paper and they both introduce us to the concept of monad. Whereas, this week's paper pays more significance to how to use monad to realize interaction in functional language while the previous one mainly describe what monad is. This paper uses the Scheme to show how to realize and use monad from the scratch, it could be considered as a tutorial on how use such efficient tool. Besides, it states how to related monad approach to other approaches to interaction. Finally, it also foresees the possibility to use monad in higher-order function which the author used to believe is misleading.

This week's assignment—— Quarantine style gives us a good intuition on how monad works. It's developed at first to solve the IO problem in pure functional languages without destroying the purity. By binding functions to a monad object and realizing IO-infected code in higher-order functions, we could implement the interactions such IO by using pure functional language. What a quite amazing approach! It gives the inspiration to many other programming languages such as Java, SML and so on.

As a programming novice, maybe OOP language could be a better choice. But, there's no denying that, mathematicians will enjoy using pure functional languages with such feature. It's such feature that shows the beauty of programming.