

Assembly Topic Paper

My topic of choice for practicum is going to be on the Assembly language(x86) and through the use of my learning experience, I will also broaden my knowledge on the foundations of programming languages and to introduce the lesser known fundamentals of computer science to open the way into theoretical computer science and create a portfolio of work that represents my sense of learning, skill, and organization.

The purpose of this is to gain an understanding of Assembly in a context where I also am learning about the principles behind the interaction between the language and its use of the hardware through my instructions of where to store the data and how the system responds to my values and commands. The goal is to get a grasp on the language however it does encourage an understanding of computers and the raw computer science plus memorization skills to be capable of independent programming in Assembly. While Assembly is only a wrapper term that encapsulates a wide range of versions with many different purposes, I will narrow my focus onto universal Assembly along with the x86 edition that is used in the Microsoft setting and is designed for Intel chips in mind.

The process will typically take a week for each topic during the initial learning where it will involve hands-on practice plus some form of note taking whether in the comments or on separate documents. Each program should have some form of documentation for my process or the principles behind it for a quick referral for an understanding behind my code and its purpose line by line. All information used are found from open sources that include but are not limited to public tutorials, chat forums, official documentation, open source programs, and other forms of media with the intent for use during free learning and as referrals when I move past the learning phase.

All sources used are documented in my public repository and will include alongside my personal notes and programs that were created whether during learning or separate practices.