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IS 301

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Week 10

**Automation**

Dictionary website defines automation as the technique, method, or system of operating or controlling a process by highly automatic means, as by electronic devices, reducing human intervention to a minimum. a mechanical device, operated electronically, that functions automatically, without continuous input from an operator. The tools that were taught in this course in each week wear like single Legos in a very huge Lego set called automation. These pieces of software can help us to build systems that could automatic perform a given task.

In the context of the 4 phases of building automation described in Documentation is Automation, the first phase was entered when the modules that provide us the questions on what are we to build. This is the documentation step as were being told what exactly needed and had to plan accordingly. The second phase began with learning Unix/Linux systems, which is an very important part in the whole computing world as its an open source kernel which is the underlying layer for most of out advance systems today. The kernel had simple commands which were automation equivalents and by writing simple scripts it helped us to understand the building blocks of this operating system and how one can manipulate any given task with simple logic and inbuild commands. Commands like grep, sed and awk seem simple in surface but these command have huge implications on larger scale. We also learned to use these stream editors and combined them with pattern manipulation like Regular expressions build simple automations.

Third Phase was trigged when we learned GIT , AWS and docker concepts as these services provide ways to debug, host systems and could be simply deployed to any systems . Manual hosting and version controls were simplified with these services bringing us closer to creating automation this term. The forth phase was an sum of all the tools we used and how to make sense of how these tools could be used to combine and build automation in larger system or an entire autonomous system. Some of the other tools I learned in other classes this terms were database systems and ways to query them for example MySQL, Xpath etc. These tools could be helpful in 2nd and 3rd phases to build systems and debug the systems. One other tool I learned was how to use IDE for example VSC which helped me in debugging, syntax highlighting, snippets, code refactoring, and embedded Git. With everything running smooth in my system this term still human interaction was needed in every step of operation except when the system had accomplished the desired output and needed to be repeated unlimited amount of time.