- 1. Problem solving: defining the problem that needs to be solved and then formulating a plan to solve it. Helps solve any problem that one might encounter in the world.
- 2. Clean coding: coding in a way that is clear and readable to everyone. Helps to organize one's thoughts in a clear and concise way.
- 3. Organization of thought: organizing code so that it makes sense and is not overwhelming. Applies to all areas of life as organization is an important skill to have.
- 4. Recursive thinking: breaking down a problem into smaller subsets. Helps to solve complicated problems one step at a time.
- 5. Data types: recognizing that not all data is equal, and some are best suited for different applications. Helps one to find the right tool.
- 6. Data storage techniques: having multiple ways of storing data, such as in trees or linked lists. Adds to the versatility of the programmer.
- 7. Attention to detail: understanding how the smallest error can completely ruin your program. Helps to recognize seemingly small issues.
- 8. Debugging: one of the most important skills to have. More complex programs will need to be debugged constantly to ensure that they work correctly.
- 9. Functions: one of the most important concepts in programming. Helps to declutter code and can be used across every programming language.
- 10. Object-oriented programming: helps with organization on more complicated projects. Can be used on any object-oriented programming language.