

### **Tools/Technologies**

- ASP.NET Web Application Framework
  - Most of us are already learning C# in Computer Science 321, so we were looking for a web framework that supported C#. Additionally, ASP.NET already has many of the features that we were looking for such as built-in testing, an easy-to-use web-building interface, data encryption support, and SQL compatibility.
- SQL and MySQL
  - For this project, we will need to store voters' data. A very commonly used language to store and query is SQL; the actual data can be stored using MySQL. These are very compatible with many different frameworks—especially ASP.NET—and are very commonly used as a standard in industry. Furthermore, SQL also offers built in encryption, which will help with keeping personal information safe.

### **Technical Skills**

- C# and ASP.NET
  - See justification above.
- Git and GitHub
  - We will use Git as our version control system in conjunction with GitHub to actually store our code and documents. Firstly, Git is the most popular VCS in modern-day use. Because of this, many companies in existence today use it as their main VCS; as such, we'd like to improve our abilities with it.
- SQL and MySQL
  - See justification above.

### **Software Process Model**

- Spiral Model
  - The Spiral Model works perfectly with the structure of this project. Each one of the assignments already acts as an actual milestone in the spiral model. Also, in each cycle, the team will be using the basic framework activities by default, so the structure of the spiral model is also conducive in this way.
  - This model also allows us to manage risk appropriately. Because we're required to turn in a functional prototype by the end of the semester, this model is perfect because it will allow us to ensure our system's functionality. Furthermore, it will allow us to create a really good base design that is maintainable and can be extended easily throughout the course of the semester and potentially beyond.
  - In general, the timeline for a spiral model is uncertain. However, in this situation, we have predetermined deadlines, so this will not be an issue.
  - Lastly, the spiral model works well because we're currently unsure about the exact specifications of our system, and the spiral model will allow us to refine our requirements over time in a risk-managed way.