**Chapter 1**

* 1. **Introduction**

Web applications or "web apps" are software programs that run on a web server. They consist of diverse components including traditional and nontraditional software, interpreted scripting languages, plain hypertext markup language (HTML) files, mixtures of HTML and programs, databases, graphical images, and complex user interfaces. [1] A web application is available anywhere a connection to the internet is found. This means a web application is not tied to a specific computer like a traditional software application, allowing for more accessibility and ease of use. The user experience tends to be more consistent with a web application, because user data is processed and stored on the server and the graphical user interface (GUI) is dependent on the web browser.



Figure 1.1 - Simple Web Application Diagram by vTech Solution Inc.

The tremendous reach of Web applications into all areas of communication and commerce makes this one of the largest and most important parts of the software industry.[1] Many software companies now offer both desktop and web versions of their most popular programs. Common examples include Microsoft Office, Apple iWork, and Intuit TurboTax. In most cases, files saved in the online version are compatible with the desktop version and vice versa. For example, if you save a.TAX2013 file in TurboTax Online, you can open and edit the file with the desktop version. [2]

* 1. **Application**

For my project, I decided to create a web application. My application will be a project portal for teams working on various projects at the Department of Natural Resources (DNR). Each project will have its own project portal and will consist of three main pages. One Page will have a map of the project area and the map will have the ability to change which layers are visible to the user. Another page will have a calendar object that will contain the project related activities and meetings. The final page will contain a file browsing object that will display a file location on the server that holds project related files. The project portal will utilize user login authentication to provide a minimum level of security.

A web application can be created using a number of different languages and technologies. The project portal will be primarily built using ASP.NET and C#. However, it will also utilize HTML as well as JavaScript. The file browser and calendar will use third-party libraries from DevExpress.

* 1. **Motivation**
  2. **Recent Developments**