



**DOCUMENT
ENGINEERING**

CMPSC 104 – Document Engineering

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ALLEGHENY COLLEGE

Report of Student Experience (RSE) Open Now

- Response rate >88% - everyone gets 2 bonus points
- Response rate >77% - everyone gets 1 bonus point

Comprehensive Review of Document Engineering

Git,
GitHub,
VS Code,
Markdown,
Jekyll, GitHub Pages,
reStructuredText (RST), Sphinx,
JAMstack (Gatsby and Netlify),
HTML, and Metadata.

Git

Git: Version control system to track changes in source code.

- **Key Commands:**
git init, git clone, git add, git commit, git push, git pull.
- **Branching and merging workflows**
- **Importance in team collaboration**

GitHub

A web-based platform for Git repositories.

- **Features:**
 - Repositories, Pull Requests, Issues, Actions, and Wiki.
- **Collaboration Tools:** Forks, Branches, and Reviews.
- Use in deploying static sites (GitHub Pages).

VS Code

A lightweight source code editor with built-in Git support.

- **Key Features:**
 - Extensions (Markdown Preview, PyLint, ESLint).
 - Integrated terminal and debugging tools.

Markdown (README & GitHub Wiki)

A lightweight markup language.

- Example: README.md and GitHub Wiki.
 - README.md: Documentation for projects.
 - GitHub Wiki: Collaborative project documentation.
- Key Syntax:
 - Headings, Lists, Links, Images, and Code Blocks.

Jekyll and GitHub Pages

Jekyll: A static site generator.

- How it works: Markdown to HTML conversion.

GitHub Pages: Free hosting service.

- Steps to deploy:
 1. Create a repository.
 2. Add Jekyll files.
 3. Enable GitHub Pages.

reStructuredText (RST) and Sphinx

RST:

- Markup syntax for technical documentation.
- Features: Headings, Tables, Links, and Admonition.

Sphinx:

- Documentation generator that converts RST to HTML, etc.
- Creating and building a Sphinx project.

JAMstack (Gatsby and Netlify)

JAMstack: JavaScript, APIs, and Markup architecture for web apps.

- **Gatsby:**
 - React-based static site generator.
 - Workflow: Create, Develop, and Build.
- **Netlify:**
 - Platform for deploying JAMstack sites.
 - Features: CI/CD and Custom Domains.

HTML

HyperText Markup Language, standard language for creating web pages.

```
<!DOCTYPE html>
<html>
  <head>
    <title>CMPSC104 HTML Website</title>
  </head>
  <body>
    <p>Hello World!</p>
  </body>
</html>
```

HTML

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8">
    <title>CMPSC104 HTML Website</title>
  </head>
  <body>
    <header>
      <nav></nav>
    </header>
    <main>
      <article>
        <section>
          <h1></h1>
        </section>
      </article>
    </main>
    <footer>
    </footer>
  </body>
</html>
```

Metadata

- Data that describes other data.
- Types of Metadata in Web Development:
 - **HTML Metadata:** <meta> tags for SEO, charset, viewport.
 - **Git Metadata:** Commit messages and Branch Descriptions.
 - **Markdown Metadata:** Front Matter in Jekyll and YAML.

Connections

