CS144 Notes: Web Server Architecture

- Static site
  - Originally web is all about downloading static content from server
    * Q: What should a Web site do to serve a static page for a request?

  - HTTP server (say, Apache) + File system
    - Configure the mapping from URL path to file system directory
      - E.g., "DocumentRoot /var/www/html/" in Apache

- Dynamic site
  - Now a lot of content is generated dynamically
    - Q: What happens when Google gets a query? What does it do?

    - Q: What happens when Facebook user logs in?

    - Q: How does a server identify which process to run to generate the corresponding content given a request?

  - Template processing (e.g., php) vs full frameworks (e.g., Python Django)

  - Popular Web Template processing
    - Apache + PHP
    - MS IIS + ASP

  - Popular "Frameworks"
    - Java Servlet, Enterprise JavaBeans
    - Python Django
    - ASP .NET
    - Ruby on Rails

- Four basic layers of any Web site

- Storage/Data layer: store and retrieve data

- Application layer: generate dynamic content

- HTTP layer: interpret request and serve response

- Encryption layer: encrypt transport