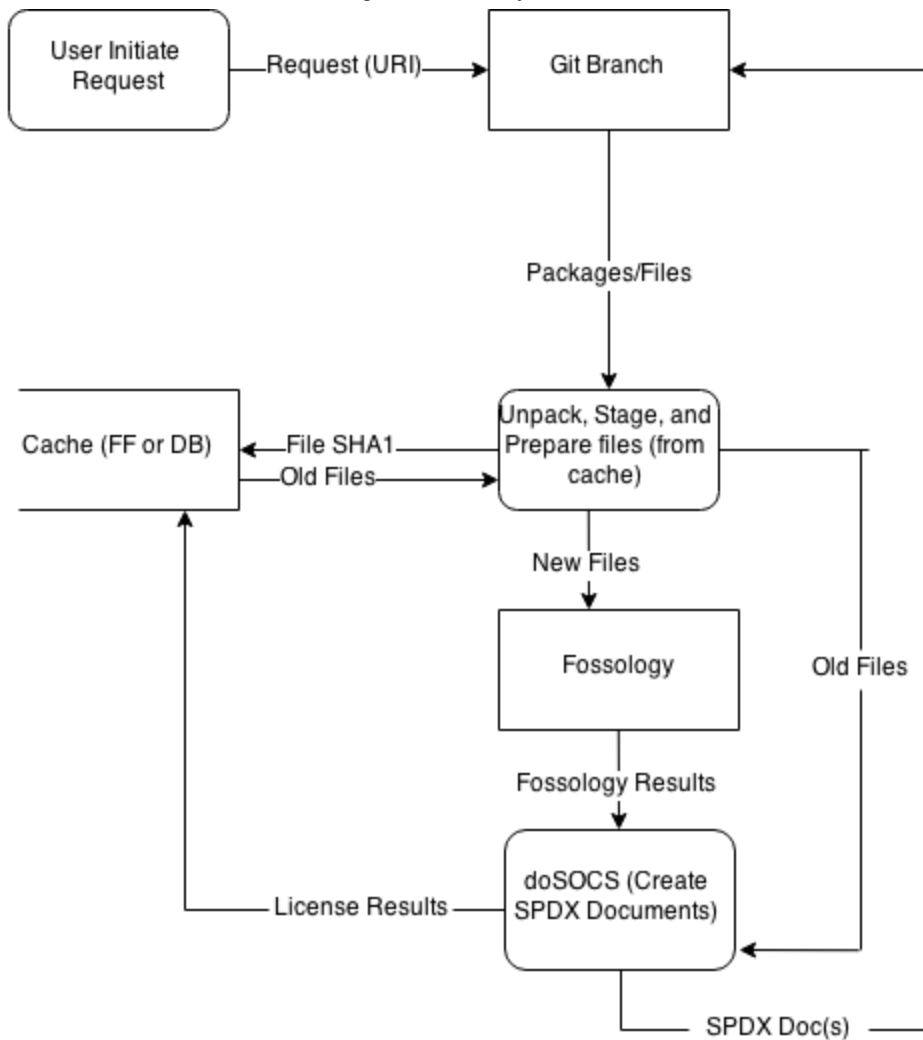Assignment 1 - Open Compliance Tooling / Analysis and Design

Collaborators: Jacob Vosik, Zachary Meyer, Daniel Patten

- Repository (i.e. GitHub)
  - We will be using a publicly available GitHub repository named [SPDX-Git-Scanner](). This repository will be used to store all the code and documentation for the official release as well as documentation intended only for use in the class (e.g., meeting times, contact information).
- System Charter and Description
  - The purpose of this project will be to create an automated process by which developers can generate SPDX documentation for an entire GitHub branch. The script will analyze an entire branch to first determine which files are eligible to be scanned (i.e., have been modified since they were last scanned), download the files, generate SPDX documentation via FOSSology and doSOCS, and upload the resulting file(s) back to the GitHub branch.
- Milestone Definitions
  - Milestone 2:
    - Our second milestone will be the full definition of our project. The resulting documentation will be our guide to the creation of the automated process. The preliminary information in milestone 1 will be expanded and updated as we find and solve problems in our design.
  - Milestone 3:
    - For the third milestone, we will have a working proof-of-concept for our design. The product may not be fully polished, and there may be features that could be added at a later date, but the core use cases will have been fulfilled and the script will perform its duties in the majority of cases. The information from milestones 1 and 2 will be expanded and updated as needed.
  - Milestone 4:
    - The final milestone will see a full working proof-of-concept. There are expected to be no remaining known bugs and features will be implemented if still applicable. The system will be fully tested and all documentation with the project will be expanded and updated to their final, professional expectations.
- System Service Request
  - We will perform our work primarily on our on computers and do not anticipate needing additional systems or licenses.
- Stakeholders (including community members)
  - The stakeholders of this project are developers who use GitHub as a repository for their code. This project may also be of interest to the GitHub, FOSSology and SPDX developers, as it concerns their work.
- Communication Management Plan
  - Our team will primarily communicate via email and pre-determined meeting times. We plan to meet every Tuesday and Thursday for discussing our current standings and where we will be going next.
  - If necessary, we will communicate with the community using the SPDX mailing lists or posting on relevant message boards.

● Structured Data Flow Diagram of the System

```
User Initiate          ──Request (URI)──►      Git Branch               ◄──────────┐
Request                                                                             │
                                                                                    │
                                              │                                     │
                                              │ Packages/Files                      │
                                              ▼                                     │
Cache (FF or DB)  ◄──File SHA1──      Unpack, Stage, and                            │
                  ──Old Files──►      Prepare files (from        ──Old Files──      │
                                      cache)                                        │
                                              │                                     │
                                              │ New Files                           │
                                              ▼                                     │
                                           Fossology                                │
                                              │                                     │
                                              │ Fossology Results                   │
                                              ▼                                     │
                  ──License Results──   doSOCS (Create            ◄────             │
                                        SPDX Documents)                             │
                                              │                                     │
                                              └────── SPDX Doc(s) ──────────────────┘
```

● Data Base / Data Store Structures of the System
  ○ We plan on using a flat file structure for our cache, however, this may change to the [SPDX Database](#) depending on where the focus of multiple projects go.
● Copyright Declarations and License Choice (documents and artifacts)
  ○ SPDX-Git-Scanner will use the Apache V2 License specification and will be under copyright of the group members.
● Change Log
  ○ The change log is located on Github under the Issue Tracker. Issues will be created for assignments, code reviews, bugs, and specifications required for the project. Milestones have been created to match the Assignments to keep track of objectives and progress.