An Assignment on

Extracting various artifacts of open-source software systems

Course Name: **Software Development Project**
Course No: **CSE 3106**

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1.
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2.
Open source project repository**:** https://github.com/galaxyproject/galaxy, Open source project name**: Galaxy**

Galaxy:

Artifact Name	What is it?	Why it is used?	How is it created? or Who creates it?
Codebase	Implemented software code	Core Executable of the software	Programmers and tools write or create it
Implemented Software Code	The specific instructions and logic are written in the Python programming language	This code implements the features and functionality	Developers write it.
Documentation	User guides, developer documentation, and README files.	It helps users and developers understand how to use, contribute to, and maintain the software.	Various contributors are involved in the development process.
License	It specifies the terms under which the software is distributed.	Important for users and contributors to understand the legal aspects of using the software.	Typically created by individuals, organizations
Pull requests	A way to propose changes to a repository	A mechanism for developers to collaborate on a project	Developers use it
Issues	A way to collaborate, report problems, and suggest improvements within a project	Users are allowed to track and manage tasks, enhancements, bugs, and other kinds of discussions related to a repository	Anyone with access to a repository can create issues.
Actions	An automation and continuous integration/continuous	To define workflows as code directly in the GitHub repository	

	deployment (CI/CD) service		
Security	Provides several security features to help developers identify and address security vulnerabilities in their code.	To create a more secure and efficient development environment	
Insights	It provides various analytics and visualizations to help users understand and track the activity	To help users gain insights into their repositories and projects	A feature provided by GitHub itself.
README.md	This file contains information that users or contributors should read to understand the project.	Used to provide introductory and essential information about a project or repository.	Developers create it.
Commit	A snapshot of the changes made to a repository.	A commit message that describes the purpose or context of the changes.	▪ git add . ▪ git commit -m "Your commit message here" ▪ git push origin <branch-name>
Branch	Parallel line of development within a repository.	It allows developers to work on different features, bug fixes, or experiments without affecting the main codebase.	▪ git checkout -b <branch-name> ▪ git checkout <branch-name> ▪ git merge <branch-name>
Tags	A label applied to a specific commit in a repository.	A way to mark a specific point in the commit history, often used for version releases.	Repository maintainers or project managers create and use it.
Add file	The action of adding new files to a repository	To add a file into the repository.	▪ git add example.txt ▪ git commit -m "Add example.txt" ▪ git push origin main
forks	A copy of a repository that is made by another user or organization	Used to freely experiment with changes without affecting the original project.	Another user or organization creates it.
Galaxy Quickstart	Some instructions	To start quickly.	▪ $ python -V ▪ $ sh run.sh
Release Notes	Documents or descriptions that provide information about the new features introduced	To find all the information about each software release.	The project maintainers or the development team associated with it.

	in a specific version. Last version: June 2023 Galaxy Release (v 23.1)		
Comment	Description of specific code or instructions.	To understand the particular instructions quickly.	The programmer writes it.
Issues and Galaxy Development	Describes how to contribute to the core galaxy repository	For general information on the Galaxy ecosystem.	Galaxy developers create it.
Galaxy Core Governance	The organizational structure governing the Galaxy core code base	Maintaining Quality, Consistency, Efficiency, and Productivity.	Core Contributors and project maintainers create it.

Open source project repository**:** https://github.com/hibernate/hibernate-orm,

Open source project name**: Elastic Search**

Elastic Search:

Artifact Name	What is it?	Why it is used?	How is it created? or Who creates it?
Codebase	Implemented software code	Core Executable of the software	Programmers and tools write or create it
Implemented Software Code	It consists of Java code that defines the search and analytics capabilities of the Elasticsearch engine.	For indexing and searching large volumes of data efficiently.	Developers write it.
Documentation	User guides, developer documentation, and README files.	It helps users and developers understand how to use, contribute to, and maintain the software.	Various contributors are involved in the development process.

Discussions	A feature that allows users to have threaded conversations and collaborate on topics.	A centralized space for communication, allowing users to ask questions, share ideas, and engage in conversations around specific topics.	Discussions can be created by various users, including repository maintainers, contributors, and community members
Wiki	A collaborative documentation space associated with a repository.	It allows users to create, edit, and organize documentation related to the project.	Initiated by repository maintainers or collaborators who have the necessary permissions.
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Jenkins	The leading open-source automation server	To support building, deploying, and automating any project..	
Comment	Description of specific code or instructions.	To understand the particular instructions quickly.	The programmer writes it.
Testing	Determine the percentage of the codebase covered by automated tests.	Checking whether the software behaves as expected and identifying any potential bugs or issues	Determine the percentage of the codebase covered by automated tests
Database	Software projects often interact with databases to store and retrieve data.	They play a critical role in applications that require persistent data storage, retrieval, and manipulation.	The development team creates it.
Custom properties	User-defined or project-specific properties that are not part of the standard metadata or configuration provided by the platform.	To store additional information, metadata, or configuration settings that are specific to the requirements of a particular project.	The development team, including repository maintainers, contributors, and individuals with the necessary permissions
Java	Java is a programming language.	Used for building web, desktop, mobile, and embedded applications.	Implemented by developers.
ORM	ORM is a programming paradigm that allows developers to interact with databases using programming language objects	Allowing developers to work with objects and classes in their programming language	Created and maintained by software development communities, organizations, or individual developers.

Gradle	Gradle is a build tool with a focus on build automation and support for multi-language development.	Gradle offers a flexible model	Software developers and development teams use Gradle