

**An Assignment on\_**"Extract various Artifacts (such as source code, commit messages and so on) of the following open source software systems: Azure Java SDK, ChatGpt.

**Course Name: Software Development Lab** 

Course No.: CSE 3106

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| Artifact Name | What is it   | Why it is used   | How is it created  |
|---------------|--|--|--|
| doc           | Documentation for the current repository                                     | To store advanced documentation for developers of SDK. | Often created manually in markup languages or tools to generate documentation from inline comments in the source code. |
| eng           | A group of engineering tools or utilities that the build configuration uses. | Used to carry out routine or repeated tasks.           | Scripting languages are used by programmers to write it.   |
| samples       | A compilation of instructions, sample code, and application examples.        | To aid in the learning and modification of developers. | From sample data sets, example setups, or short bits of code.  |

| Azure management client library  A higher-level, object oriented API | A method of managing<br>Azure resources that puts<br>an emphasis on<br>uniformity, conciseness,<br>and simplicity. | Through an already-existing system for user and developer input. |
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<u>Azure Java SDK</u>: The Azure SDK for Java allows Java developers to build applications that leverage various Azure services, such as storage, compute, networking, databases, and more.

|                    |   | T  |   |
|--------------------|---|--|---|
| Commit             | Record of changes to the code           | Documents changes made to the codebase, provides a version history                         | Developers commit changes with messages for tracking  |
| Core<br>Executable | The main executable of the software     | The compiled version of the software that can be executed to run the application.          | Created through the compilation process, converting source code into machine-readable instructions. |
| Actions            | Automated workflows triggered by events | Used for automating tasks like testing, building, and deployment based on specific events. | Configured through YAML files defining workflows and actions to be performed.                       |
| Codebase           | Implemented software code               | The fundamental collection of source code files that constitute the software application.  | Programmers and tools write or create it.   |

| Core executables |   |   | Compiled from the source code.  |
|------------------|---|---|---|
|                  | Executables with a user-centered design.  | Combining source code and graphical user interface (GUI).                       |   |
| Pull Requests    | Proposed changes submitted by a developer | Allows developers to review, discuss, and merge code changes into the codebase. | Developers create a branch, make changes, and submit a pull request for review. |

| Discussions | Conversations around code or project-related topics                | Facilitates communication amongteam members regarding code implementation or project decisions.                            | Users initiate discussions, and team members participate in conversations.                                |
|-------------|--|--|---|
| Wiki        | Collaborative documentation space                                  | A place to store and share project-related documentation and information.  | Created and edited by project contributors, usually using a markup language.                              |
| Security    | Information related<br>to security measures<br>and vulnerabilities | Monitors and addresses security concerns within the codebase.  | Security information is managed and updated by the development team, addressing reported vulnerabilities. |
| Readme      | Project introduction and setup instructions                        | Provides essential information about the project, helping users and contributors understand its purpose and how to use it. | Created and maintained by project contributors in Markdown or another markup language.                    |
| Activity    | Record of projectrelated events and changes                        | Offers insights into the project's recent activities, such as code changes, pull requests, and discussions.                | Automatically generated by the platform based on user actions and project events.                         |

| Custom Properties | User-defined<br>metadata or<br>attributes | Additional information attached to issues, pull requests, or other items | Users can define and set custom properties as needed |
|-------------------|---|--|--|
|                   |   |  |  |

| Releases | Versioned releases of the software | Represents stable and tested versions of the software for distribution. | Created by the development<br>team when they decide a set of<br>features is ready for a stable<br>release. |
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|          |                                    |   |  |

## <u>ChatGPT</u>: ChatGPT is a language model developed by OpenAI, based on the GPT (Generative Pre-trained Transformer) architecture.

| Artifact Name | What is it   | Why it is used   | How is it created  |
|---------------|--|--|--|
|               |  |  |  |
| assets        | Usually refers to binary files or other non-code files, such as documents, images, configuration files, or other binary files. | Different uses, such as using pictures for UI components or logos, documents for documentation, and configuration files for setup. | Tools for graphic design are used for images, text editors are used for documents, and configuration files are created menudriven. |
| Pull Requests | Proposed changes submitted by a developer  | Allows developers to review, discuss, and merge code changes into the ChatGPT codebase.  | Developers create a branch, make changes, and submit a pull request for review.  |

| Actions     | Automated workflows triggered by events   | Used for automating tasks like testing, building, and deployment based on specific events in the ChatGPT repository.                | Configured through YAML files defining workflows and actions to be performed.                              |
|-------------|---|---|--|
| Discussions | Conversations around code or project-related topics                               | Facilitates communication among team members regarding ChatGPT's code implementation or project decisions.                          | Users initiate discussions, and team members participate in conversations.                                 |
| script      | Code files created with scripting languages such as JavaScript, Python, or Shell. | To carry out operations, automate tasks, or carry out tasks.  | Integrated development environments (IDEs) are used by developers to create, modify, and save these files. |
| src         | Usually refers to a project's source code files and stands for "source."          | Comprises the primary code that carries out the project's features and serves to specify the logic and functioning of the software. | Text editors or IDEs are used by developers to construct source code files.                                |

| public          | Any files intended for usage by the whole public. Opensource licensing, documentation, and other things might be involved. | Information exchange, usage rules, and licensing specifics that promote developer cooperation. | Typically,<br>documents are either<br>manually made or<br>written in markdown<br>formats.           |
|-----------------|--|--|---|
| Codebase        | Implemented software code  | The fundamental collection of source code files that constitute the ChatGPT application.       | Programmers and tools write or create it.   |
| Core Executable | The main executable of the software  | The compiled version of ChatGPT that can be executed to run the application.                   | Created through the compilation process, converting source code into machine-readable instructions. |
| Commit          | Record of changes to the code  | Documents changes made to the codebase, provides a version history                             | Developers commit changes with messages for tracking  |

| Wiki     | Collaborative documentation space                            | A place to store and share ChatGPT-related documentation and information.   | Created and edited by project contributors, usually using a markup language.                              |
|----------|--|---|---|
| Security | Information related to security measures and vulnerabilities | Monitors and addresses security concerns within the ChatGPT codebase.   | Security information is managed and updated by the development team, addressing reported vulnerabilities. |
| Readme   | Project introduction and setup instructions                  | Provides essential information about ChatGPT, helping users and contributors understand its purpose and how to use it.  | Created and maintained by project contributors in Markdown or another markup language.                    |
| Activity | Record of projectrelated events and changes                  | Offers insights into recent activities in the ChatGPT repository, such as code changes, pull requests, and discussions. | Automatically generated by the platform based on user actions and project events.                         |

| Custom Properties | User-defined | Additional information   | Users can define and |
|-------------------|--------------|--------------------------|----------------------|
|                   | metadata or  | attached to issues, pull | set custom           |
|                   | attributes   | requests, or other items | properties as needed |
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