Assignment : Java-Day-1

Create a simple application to manage employee information. Use Gradle to organize the project into multiple modules to handle different functionalities. Each module will focus on different aspects of the application.

Module 1 - Core

1. Create an Employee class with attributes like id, name, age, and department.
2. Implement appropriate getters and setters.
3. Use primitive variables like int, String, etc., for attributes in the Employee class. Demonstrate type casting (if applicable) while working with different types of variables.

Module 2 - Data

1. Implement an EmployeeRepository class that uses an array to store multiple Employee objects.
2. Implement methods to add, retrieve, and update employees in the repository.
3. Demonstrate method overloading for retrieving employees based on different parameters (e.g., ID, name).

Module 3 - Logging

1. Use a logging framework (like SLF4J and Logback) to log events and messages throughout the application.
2. Log events for employee information addition, retrieval, and updates. Log your events and operations in a file.

Module 4 - App

1. Create a Main class here to integrate the functionalities from the core, data, and logging modules.
2. Perform operations like adding employees, updating information, and retrieving employees based on different criteria.
3. Utilize logging to track these operations and outcomes in a file.
4. Set up a Gradle project with the build.gradle file specifying the multi-module structure. Define dependencies between modules to ensure proper integration and functionality. Use Gradle to build, package, and run the application.

Instructions for Learners

1. Set up a Gradle project with the defined modules and structure.

2. Implement the Employee class with appropriate attributes and methods in the core module. Implement the EmployeeRepository class with array-based storage and operations in the data module.
3. Configure logging and implement logging statements in the logging module to log things in a file. Integrate all functionalities in the app module's Main class and test different scenarios.
4. Use appropriate type casting and demonstrate understanding where required.

Submission Rubrics:

Please make the submission on a shared github repository, under the folder for **Day-1-Java**, and keep the submission as **Day1_Java_YOURNAME**