

Report In Class Activity: 20/02

As said in the class we tried finding a Factory patter in the code. Please find th

Based on the analysis, the Factory Pattern is the most evident pattern in the provided code. The Runner.java file uses Arrays.asList to create a list of Flight objects, which is a simple form of the factory pattern.

To refactor the code using the Factory Pattern, we can create a FlightFactory class that will be responsible for creating Flight objects. This way, we can encapsulate the creation logic and make it more flexible and maintainable.

Here's how you can refactor the Runner.java file to use a FlightFactory:

First, create a FlightFactory class:

```
public class FlightFactory {
    public static Flight createFlight(int flightNumber, Airport departureAirport, Airport arrivalAirport, Object aircraft) {
        return new Flight(flightNumber, departureAirport, arrivalAirport, aircraft);
    }
}
```

Then, in the Runner.java file, replace the direct creation of Flight objects with calls to the FlightFactory:

```
public class Runner {
    // ... (other code remains unchanged)

    static List<Flight> flights = Arrays.asList(
        FlightFactory.createFlight(1, airports.get(0), airports.get(1), aircrafts.get(0)),
        FlightFactory.createFlight(2, airports.get(1), airports.get(2), aircrafts.get(1)),
        FlightFactory.createFlight(3, airports.get(2), airports.get(4), aircrafts.get(2)),
        FlightFactory.createFlight(4, airports.get(3), airports.get(2), aircrafts.get(3)),
        FlightFactory.createFlight(5, airports.get(4), airports.get(2), aircrafts.get(4)),
        FlightFactory.createFlight(6, airports.get(5), airports.get(7), aircrafts.get(5))
    );

    // ... (rest of the class remains unchanged)
}
```

After Implementing the code: Build Success!!

```
[INFO] Tests run: 20, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO]
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ flight-reservation ---
[INFO] Building jar: /home/vilal/MyWork/SE/ClassActivity/ClassActivity-4/Reservation-System-Starter/target/flight-reservation-1.0-SNAPSHOT.jar
[INFO]
[INFO] --- maven-install-plugin:2.4:install (default-install) @ flight-reservation ---
[INFO] Installing /home/vilal/MyWork/SE/ClassActivity/ClassActivity-4/Reservation-System-Starter/target/flight-reservation-1.0-SNAPSHOT.jar to /home/vilal/.m2/repository/com/github/fortiss-cce/flight-reservation/1.0-SNAPSHOT/flight-reservation-1.0-SNAPSHOT.jar
[INFO] Installing /home/vilal/MyWork/SE/ClassActivity/ClassActivity-4/Reservation-System-Starter/pom.xml to /home/vilal/.m2/repository/com/github/fortiss-cce/flight-reservation/1.0-SNAPSHOT/flight-reservation-1.0-SNAPSHOT.pom
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO]
[INFO] Total time: 3.683 s
[INFO] Finished at: 2024-02-20T15:14:41+05:30
[INFO]
[INFO]
[INFO] ~/My/SE/CL/ClassActivity-4/Reservation-System-Starter on master took
[INFO] ~/MyWork/SE/ClassActivity/ClassActivity-4/Reservation-System-Starter on master took 5s at 15:14:41
```