Singleton Task

A System Clock gives us the current time and date.

why it singleton?
It ensures that there is synchronized reference to the current time across different parts of the application. which is important for time-sensitive operations.

code:
<mark>SystemClock class:</mark>

```java
import java.time.LocalDateTime;
import java.time.format.DateTimeFormatter;

public class SystemClock {
    private static SystemClock instance;

    private SystemClock(){
    }

    public static SystemClock getInstance(){
        if(instance == null)
            instance = new SystemClock();
        return instance;
    }

    public String getCurrTime() {
        DateTimeFormatter dtf = DateTimeFormatter.ofPattern("yyyy/MM/dd HH:mm:ss");
        LocalDateTime now = LocalDateTime.now();
        return dtf.format(now);
    }
}
```

****
<mark>main function:</mark>

```java
public static void main(String[] args) {
    SystemClock sysClock1 = SystemClock.getInstance();
    System.out.println("The current time is: " + sysClock1.getCurrTime());

    SystemClock sysClock2 = SystemClock.getInstance();
    System.out.println(sysClock1.equals(sysClock2)+" we have only one object ");
}
```

```java
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public class SystemClock {
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public static void main(String[] args) {

    SystemClock sysClock1 = SystemClock.getInstance();
    System.out.println("The current time is: " + sysClock1.getCurrTime());

    SystemClock sysClock2 = SystemClock.getInstance();
    System.out.println(sysClock1.equals(sysClock2)+" we have only one object ");

}
```

output:

```
Output - GSG (run)

run:
The current time is: 2024/07/20 22:14:33
true we have only one object
BUILD SUCCESSFUL (total time: 0 seconds)
```