

# # Enterprise Java #

## Timers and Schedulers

### How to create :-

- ➔ Java with Maven -> EJB Module -> TimerAndScheduler8App -> Finish
- ➔ In Source Package -> new package -> named -> ejb -> new -> other -> Java Interface -> named (TimerEJBRMote)
- ➔ In Source Package -> new package -> named -> ejb -> new -> Session Bean -> named (TimerEJB)
- ➔ Then Create servlet

### Why Use :-

- ➔ Timers and Schedulers are used in Java when you want your application to perform **tasks automatically at a specific time or repeatedly after a fixed interval — without requiring user input.**
- ➔ We use them to create programs that can **run tasks on their own**, like:
  - ✓ Send email reminders every day at 10 AM
  - ✓ Generate backup of database every hour
  - ✓ Clean temporary files automatically
  - ✓ Schedule SMS/notifications in banking, hospitals, etc.
  - ✓ Run cron-like jobs in Java EE / enterprise applications

### What This Means Step by Step :-

| Code Part  | Meaning  |
|------------|--|
| @Singleton | Only one instance of this class exists in the whole application.   |
| @Startup   | The scheduler starts running automatically when the server starts. |

| <b>Code Part</b> | <b>Meaning</b>  |
|------------------|---|
| @Schedule(...)   | This defines when the task should run.                          |
| hour="*"         | Run every hour.   |
| minute="*"       | Run every minute.   |
| second="*/10"    | Run every 10 seconds.   |
| persistent=false | Do NOT store timer in database, it resets after server restart. |
| executeTask()    | This method runs automatically every 10 seconds.                |