Employee Management System (EMS)

Problem Statement

An organization needs a simple **Employee Management System** to maintain employee records for its HR and payroll departments.

The objective of this project is to develop a **console-based Java application** using **Object-Oriented Programming principles and packages** to manage employee data efficiently.

The system should allow the administrator to:

- Add new employees

- Automatically generate unique employee IDs

- Search employees by ID

- Update employee salary

- Display all employees

    The system will store data **in memory using arrays ()**.
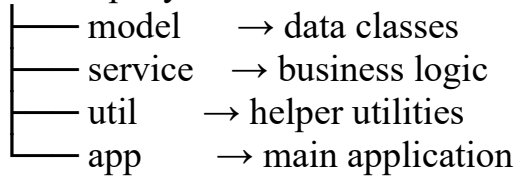
Functional Requirements

The system must:

1. Add Employee
    → Store name, department, salary

2. Auto-generate Employee ID
    → Unique ID for each employee

3. Search Employee
    → Find employee using ID

4. Update Salary
    → Modify existing salary

5. View All Employees
    → Display all stored employees

Package Structure

com.company.ems
├── model → data classes
├── service → business logic
├── util → helper utilities
└── app → main application

Class Responsibilities

Class Employee (model)

- Stores employee data

- Fields: id, name, department, salary

- Getters/Setters methods

- Use constructor to initialize an object.

Class EmployeeService (service)

- Methods:

    1. addEmployee()
    2. searchEmployee()
    3. updateSalary()
    4. viewAll ()

- Add, search, update, display

- Array of object to store employees

Class IdGenerator (util)

- Generates unique employee IDs automatically

- Uses:
   static variable
   static method

Class EMSApp (app)

- Contains main()

- Menu-driven program

- Takes user input

Expected Output (Sample)

```
===== Employee Management System =====
1 Add Employee
2 View All
3 Search
4 Update Salary
5 Exit

Enter choice: 1
Name: Rahul
Dept: IT
Salary: 50000

Employee Added Successfully
Generated ID: 101




===== Employee Management System =====
1 Add Employee
2 View All
3 Search
4 Update Salary
5 Exit

Enter choice: 2
101 | Rahul | IT | 50000.0
```

```
===== Employee Management System =====
1 Add Employee
2 View All
3 Search
4 Update Salary
5 Exit

Enter choice: 3
Enter a id  of employee to search : 101
Employee found !
```