

Global Tech Industries

This problem will be referenced throughout the course.

The fictitious company Global Tech Industries needs a system that tracks employees and clients.

All employees have a 9-digit *employee identification number*, *first name* and *last name*. Employees who work in the high-security laboratory are classified as *secure employees*. A secure employee has a *clearance level* of 1-9. Other employees may belong to an internal tech-support group and are classified as *support employees*. A support employee is on 24-hour call and thus the employee's *pager number* (a 10-digit number which includes an area code) must be stored. Note that not all employees are classified as support or secure.

All clients have a 5 character *client identification code* that may include letters and digits, and a *first name* and *last name*.

The system should allow users to:

- Enter an employee into the system. If the employee is classified as "secure" or "support," then additional information must be requested and stored.
- Enter a client into the system.
- Retrieve an employee or client by entering the identification number or code.
- List all employees or clients.

Global Tech has three divisions: Robotics, Fiber Optics, and Fluid Delivery Systems. Each division has multiple *employees* (of all types), one special employee (who could be of any type) called the *Division Supervisor*, and a *revenue* (just a dollar amount).

Global Tech Industries operates under a complex set of labor rules. Initially, hires are in the provisional category. After six months, new hires are evaluated and either terminated or become full employees. Employees who are accused of violating company rules are suspended pending investigation, which either clears the employee of wrongdoing, or the employee is terminated. After ten years, employees automatically become senior employees, which grants access to a corporate lounge. Of course, employees may quit at any time, and may also be laid off for economic reasons. After twenty years, employees who leave employment for any reason become pensioned employees.