

AT82.02

DATA MODELING AND MANAGEMENT

EXERCISE: DB DESIGN

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FixIT

The repair company “FixIT” has hired you to design a database system to keep track of its operations. FixIT gives services to repair any IT computing devices such as computer desktops, laptops and smartphones of any models and makes. The system should keep track of the repair jobs, the items (or parts) used for each repair job, the labor costs for each repair job, the repairmen performing each repair job, and the total cost of each repair job.

When a customer bring a device in to be repaired, he/she describes the device’s problem, makes a deposit on the repair job, and is given an estimated date to return and uplift their devices. Repairmen then perform repairs based on the repair job, and detail the labor costs and the items (parts) used for each repair job.

Each customer may check the status and details of his/her repair job from the online system by entering the job ID or customer name. When a customer returns, he/she pays the total cost of the repair job less the deposit, collects a receipt for the payment, and uplifts the repaired device.

The following queries and operations are said to be frequent and important:

- Insert a new repair job. Update a particular repair job.
- Search for the status of the repair jobs using job ID or customer name.
- List all repair jobs by the status, such as pending, in-progress, await-parts, finished, collected.
- Daily report of finished jobs and total costs sorted by repairmen and by total costs.
- Monthly repairmen performance tracking report.