# IST359 Project Template

**Project Name:** Hospital Database   
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This database is used to track hospitals. For the purpose of this project, I decided to follow what I know about hospitals, and from what my sister, who works at a hospital as a volunteer, has told me. She works in a NewYork-Presbyterian hospital, so this database will be modeled after it. I chose a hospital because my original idea was to use Best Buy but it was similar to the work we did in labs and class. In the hospital, there are employees, patients, doctors/nurses, treatment, and ward. The hospital database is used to track what nurse or doctor took care of a patient and to track the patient’s status. For example, a patient could be diagnosed with something and receive a treatment. Depending on the situation, the patient will either stay in the hospital or is released. If the patient needs to stay in the hospital, they require additional help, such as being placed in a room and most likely further treatment such as medication. By being able to track all of this information, a hospital has records of a person’s medical history and who was where and when.

# Data Requirements

## Entities

* **Patient** – Someone who is admitted to the hospital
* **Employee (Nurse or Doctor)** – Someone who takes care of the patient
* **Ward –** The department or division of a hospital where patients with similar kind of care go to
* **Treatment –** Medication taken by the patient
* **Bill –** Payment required from the patient
* **Room –** Where the patient will be staying

## Attributes

* **Patient -** Name [R, C], Patient ID [R, U], Address [R, C], Phone number [R]
* **Employee –** Employee ID [R, U], Name [R, C], Department/Ward [R]
* **Ward –** Ward ID [R, U], Ward name [R]
* **Treatment –** Treatment type [R, M], Date [R], Treatment ID [R, U]
* **Bill –** Bill number [R, U], Bill Date [R], Bill amount [D]
* **Room –** Room number [D], Room ID [R, U]

## Relationships

* A **Patient** is taken care by one or more **employee**, an **employee** takes care of zero or more **patients**
* An **employee** works in one and only one **ward**, a **ward** is assigned to one or more **employee**
* A **patient** receives zero or more **treatments**, a **treatment** is given to one and only one **patient**
* A **bill** is given to one or more **patients**, a **patient** is given one and only one **bill**
* A **room** is occupied by zero or more **patients**, a **patient** stays in zero or one **room**
* A **room** is staffed by one or more **employee**, and an **employee** staffs zero or more **rooms**
* A **patient** is placed in one and only one **ward**, a **ward** is assigned to one and only one **patient**