**Princess Sumaya University for Technology**

**King Hussein School for Information Technology**

**Computer Science Department**

**Database Systems**

**Quiz2**

**Student Name: Student ID:**

**Create an ER diagram based on the following requirements. Show entities, relationships, and attributes.**

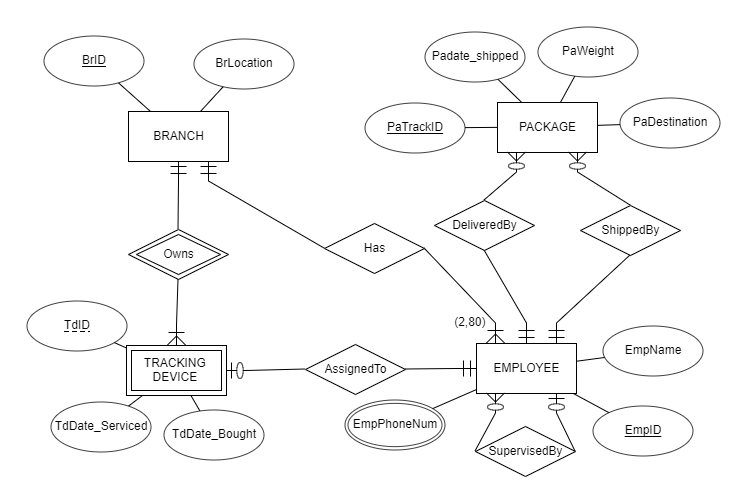
**Packages-R-Us**, is a shipping company that keeps track of:

* For each branch: *brlocation*, unique *brid*
* For each package: *paweight*, *padate\_shipped*, *padestination*, unique *patrackid*.
* For each employee: *empname*, multiple *empphonenumbers*, unique *empid.*
* For each tracking device: *tddate\_bought, tddate\_serviced*, *tdid* (tdid is unique within the branch that owns the tracking device but not across the entire Packages-R-Us company).

**Additional requirements:**

* Each employee works in one branch.  
  Each branch has multiple employees (up to 80 of them).
* Each package was shipped-out by one employee.  
  Each employee can ship-out many packages, but does not have to ship any.
* Each package was delivered by one employee.  
  Each employee can deliver many packages, but does not have to deliver any.
* Each branch owns one or more tracking devices  
  Each tracking device is owned by one branch
* Each tracking device is assigned to exactly one employee.  
  Each employee either has one or no tracking devices assigned to him/her.

**Answer:**



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**Additional requirements:**

* Each employee works in one branch.  
  Each branch has multiple employees (up to 80 of them).
* Each package was shipped-out by one employee.  
  Each employee can ship-out many packages, but does not have to ship any.
* Each package was delivered by one employee.  
  Each employee can deliver many packages, but does not have to deliver any.
* Each employee can supervise many other employees, but does not have to supervise any.  
  Each employee either has no supervisors or is supervised by one employee.
* Each branch owns one or more tracking devices  
  Each tracking device is owned by one branch
* Each tracking device is assigned to exactly one employee.  
  Each employee either has one or no tracking devices assigned to him/her.

**Answer:** (TRACKING DEVICE, should be a strong entity (single-lined) not weak, the relationship symbol will be single-lined, and TdID, should be underlined as a unique attribute, not a partial key.)

