Relational Database Schema -
S = {R1, R2, Rm} and IC (Integrity Constraints)

Relational Database State -
DB = {r1, r2, ..., rm}

valid state

Relational Model Constraints (4 Categories)

- Referential Integrity Constraints.
- Key Constraints.
- Entity Integrity Constraint.
- Domain Constraints.

Implicit Constraints - Relational Model.
Explicit Constraints - DDL.
Semantic Constraints - e.g. these are business rules we specify in the application programs (API).

SQL (Structured Query Languge)

Portability - makes it easy to switch database management systems*

Table, Column, Row.

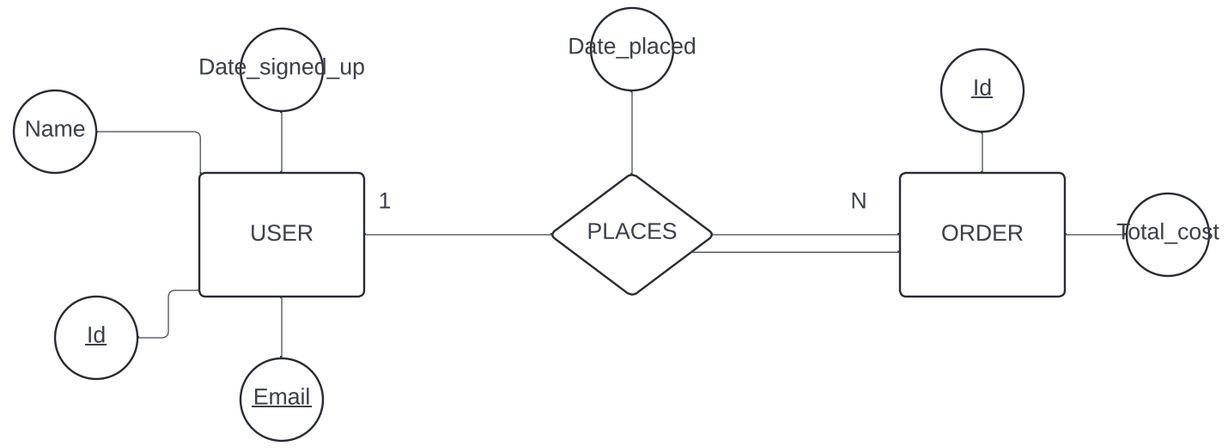
Schema - SQL

Logical Data Requirements

Amazon has users. Users are uniquely identified by their email or id number. I need to keep track of name and date they signed up.

Users can place orders. Orders are uniquely idenfied by an order number. Total cost of order must be recorded. The date the order is placed must also be recorded.

Conceptual Model



User(Id, Email, DateSignedUp, Name)

Domains

Arity (degree) = 4

dom(Id)
- Integer

dom(Email)
- Character string of the form xxx.xxx@xxx.xxx.
- dom(DateSignedUp) Date, signed up date has to be >= current date.
- dom(Name) Character string, maybe define some max length. talk to kenny*