# **VOD Business Rules**

## **Constraints & Integrity (conceptual)**

**Uniqueness**: Actor.email, Director.email, Customer.email must be unique.

**Validation domains**:

* Movie.rating ∈ {G, PG, 14A, …}
* Customer.postalCode matches L9L9L9 (CA format)
* Customer.phone matches 999.999.9999
* Card numbers are digits-only; card type ∈ {AX, MC, VS}
* Rental.customerRating ∈ {1,2,3,4,5}

**Temporal**:

* Rental.startedAt > Rental.rentedAt (once viewing starts)
* Rental.expiresAt = Rental.startedAt + 24h and therefore > startedAt

**Card capture on Rental**: charged card values are stored on the **Rental** (even if different from the customer’s default).

**Category hierarchy**: a Category may have **zero or one** parent; a parent may have many children.

## **Assumptions (to resolve gaps/ambiguities)**

**Identifiers**: Each entity has a single, surrogate identifier (e.g., movieId) at the conceptual level for clarity.

**Title Mandatory**: **Movie.title** is required; titles are **not** globally unique (remakes allowed).

**Prices & Currency**: priceSD and priceHD are stored in a single currency for the catalog (assumed CAD) and are non-negative; tax handling is out-of-scope.

**Boolean Flags**: *newRelease*, *mostPopular*, *comingSoon* are independent booleans (not a single enumerated state), as per “binary attributes”.

**Rating Source**: The rating set is treated as a **domain/lookup** governed externally; we won’t model the full classifier taxonomy at the conceptual level.

**Advisory Reuse**: Advisories are reusable descriptors (e.g., “Violence,” “Coarse Language”), hence a separate **Advisory** entity with M:N to **Movie**.

**Casting Attributes**: Only **roleName** is stored on the Actor–Movie association. (No billing order or screen time unless added later.)

**Customer Address**: “Full address” is decomposed into standard lines/city/province/country/postalCode at logical design; conceptually it’s a single Address composite.

**Default Payment**: Customer has a “default” card on profile; **Rental** stores the actual card charged, which may differ from default.

**Wishlist Semantics**: A customer can add the same movie to the wishlist **once** at a time (we treat Customer–Movie as unique in Wishlist; *wishlistEntryId* supports auditing).

**Temporal Edge Cases**: A Rental can exist with **startedAt = null** (not yet started), and consequently **expiresAt** is null until start. Once set, expiresAt = startedAt + 24h.

**Data Minimization**: No refund, subscription, or promo/discount modeling (explicitly out-of-scope).

**Internationalization**: Phone and postal patterns follow the specified formats; if future regions are needed, patterns may be extended or localized.