

Views in relational algebra

V1: This view contains all the producers and directors of all Marvel Movies in the database.

TABLES USED: DIRECTORS(directorID, name, nationality, dateOfBirth, sex)
PRODUCERS(producerID, name, dateOfBirth, sex)
MOVIES_HAVE_DIRECTORS(directorID, movieName)
MOVIES_HAVE_PRODUCERS(producerID, movieName)

VIEW: $A \leftarrow \pi_{\text{movieName, pName}}(\rho_{\text{producerID, pName, dateOfBirth, sex}}(\text{PRODUCERS}) \bowtie \text{MOVIES_HAVE_PRODUCERS})$
 $B \leftarrow \pi_{\text{movieName, dName}}(\rho_{\text{directorID, dName, nationality, dateOfBirth, sex}}(\text{DIRECTORS}) \bowtie \text{MOVIES_HAVE_DIRECTORS})$
 $\rho_{\text{MOV_PROD_DIR}}(\pi_{\text{movieName, pName, dName}}(A \bowtie B))$

V2: This view contains all the characters who have participated in each event.

TABLES USED: CHARACTERS(charName, species, dateofBirth, item)
EVENTS(eventID, type, description, movieName, locationID)
CHARACTERS_PARTICIPATEIN_EVENTS(charName, eventID)

VIEW: $C \leftarrow \pi_{\text{charName, eventID, movieName}}(\text{CHARACTERS} \bowtie \text{CHARACTERS_PARTICIPATEIN_EVENTS})$
 $\rho_{\text{EVENT_CHAR}}(\pi_{\text{charName, description, type}}(C \bowtie \pi_{\text{description, type, eventID, movieName}}(\text{EVENTS})))$

V3: This view contains all the actors in the system and the characters that they have embodied.

TABLES USED: ACTORS (actorID, name, nationality, dateOfBirth, sex, oscarsWon, charName)
CHARACTERS (charName, species, dateofBirth, item)

VIEW: $\rho_{\text{ACT_CHAR}}(\pi_{\text{name, charName}}(\text{ACTORS} \bowtie \text{CHARACTERS}))$