

**Reduction of entities:**

crew(first\_name, last\_name, dob, gender)

PK: first\_name, last\_name

project(title, release\_year, studio, series)

PK: title, release\_year

character(identity, hero\_name)

PK: identity

character\_power(identity, power) **/\* multivalued attribute to character \*/**

PK: identity, power

FK: character\_power(identity) -> character(identity)

episode(title, release\_year, season, episode\_no, episode\_title)

PK: title, release\_year, season, episode\_no

FK: episode(title) -> show(title)

episode(release\_year) -> show(release\_year)

**Reduction of ISA relationships:**

movie(title, release\_year)

PK: title, release\_year

FK: movie(title) -> project(title)

movie(release\_year) -> project(release\_year)

show(title, release\_year)

PK: title, release\_year

FK: show(title) -> project(title)

show(release\_year) -> project(release\_year)

director(first\_name, last\_name)

PK: first\_name, last\_name

FK: director(first\_name) -> crew(first\_name)

director(last\_name) -> crew(last\_name)

actor(first\_name, last\_name)

PK: first\_name, last\_name

FK: actor(first\_name) -> crew(first\_name)

actor(last\_name) -> crew(last\_name)

**Reduction of relationships:**

episode\_director(first\_name, last\_name, title, release\_year, season, episode\_no)

PK: first\_name, last\_name, title, release\_year, season, episode\_no

FK: episode\_director(first\_name) -> director(first\_name)

episode\_director(last\_name) -> director(last\_name)

episode\_director(title) -> episode(title)

episode\_director(release\_year) -> episode(release\_year)

episode\_director(season) -> episode(season)

episode\_director(episode\_no) -> episode(episode\_no)

movie\_director(first\_name, last\_name, title, release\_year)

PK: first\_name, last\_name, title, release\_year

FK: movie\_director(first\_name) -> director(first\_name)

movie\_director(last\_name) -> director(last\_name)

movie\_director(title) -> movie(title)

movie\_director(release\_year) -> movie(release\_year)

plays(first\_name, last\_name, title, release\_year, identity)

PK: first\_name, last\_name, title, release\_year, identity

FK: plays(first\_name) -> actor(first\_name)

plays(last\_name) -> actor(last\_name)

plays(title) -> project(title)

plays(release\_year) -> project(release\_year)

plays(identity) -> character(identity)