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@title IMDB TBox (notazione logica)

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Versione Preliminare

Le righe che iniziano con # sono commentate

PERSON ⊑ δ (name)

δ (name) ⊑ PERSON

(funct name)

PERSON ⊑ δ (surname)

δ (surname) ⊑ PERSON

(funct surname)

PERSON ⊑ δ (birthDate)

δ (birthDate) ⊑ PERSON

(funct birthDate)

δ (birthName) ⊑ PERSON

(funct birthName)

δ (height) ⊑ PERSON

(funct height)

δ (biography) ⊑ PERSON

(funct biography)

δ (trademark) ⊑ PERSON

δ (trivia) ⊑ PERSON

δ (personalQuotes) ⊑ PERSON

δ (lastAppearances) ⊑ PERSON

δ (akaNames) ⊑ PERSON

∃ cityOfBirth ⊑ PERSON

∃ cityOfBirth- ⊑ CITY

PERSON ⊑ ∃ (cityOfBirth)

(funct cityOfBirth)

∃ salary ⊑ PERSON

∃ salary- ⊑ MOVIE

salary ⊑ δ (money)

δ (money) ⊑ salary

(funct money)

∃ directedBy ⊑ PERSON

∃ directedBy- ⊑ MOVIE

MOVIE ⊑ ∃ directedBy-

δ (role1) ⊑ directedBy

(funct role1)

∃ writtenBy ⊑ PERSON

∃ writtenBy- ⊑ MOVIE

MOVIE ⊑ ∃ writtenBy-

δ (role2) ⊑ writtenBy

(funct role2)

∃ producedBy ⊑ PERSON

∃ producedBy- ⊑ MOVIE

MOVIE ⊑ ∃ producedBy-

δ (role3) ⊑ producedBy

(funct role3)

∃ editedBy ⊑ PERSON

∃ editedBy- ⊑ MOVIE

MOVIE ⊑ ∃ editedBy-

δ (role4) ⊑ editedBy

(funct role4)

∃ composedBy ⊑ PERSON

∃ composedBy- ⊑ MOVIE

MOVIE ⊑ ∃ composedBy-

δ (role5) ⊑ composedBy

(funct role5)

∃ cinematographyBy ⊑ PERSON

∃ cinematographyBy- ⊑ MOVIE

MOVIE ⊑ ∃ cinematographyBy-

δ (role6) ⊑ cinematographyBy

(funct role6)

∃ costumeDesignBy ⊑ PERSON

∃ costumeDesignBy- ⊑ MOVIE

MOVIE ⊑ ∃ costumeDesignBy-

δ (role7) ⊑ costumeDesignBy

(funct role7)

∃ productionDesignBy ⊑ PERSON

∃ productionDesignBy- ⊑ MOVIE

MOVIE ⊑ ∃ productionDesignBy-

δ (role8) ⊑ productionDesignBy

(funct role8)

∃ castingBy ⊑ PERSON

∃ castingBy- ⊑ MOVIE

MOVIE ⊑ ∃ castingBy-

$\delta$  (role9)  $\sqsubseteq$  castingBy

(funct role9)

$\exists$  originalMusicBy  $\sqsubseteq$  PERSON

$\exists$  originalMusicBy-  $\sqsubseteq$  MOVIE

MOVIE  $\sqsubseteq$   $\exists$  originalMusicBy-

$\delta$  (role10)  $\sqsubseteq$  originalMusicBy

(funct role10)

$\exists$  artDirectionBy  $\sqsubseteq$  PERSON

$\exists$  artDirectionBy-  $\sqsubseteq$  MOVIE

MOVIE  $\sqsubseteq$   $\exists$  artDirectionBy-

$\delta$  (role11)  $\sqsubseteq$  artDirectionBy

(funct role11)

$\exists$  setDecorationBy  $\sqsubseteq$  PERSON

$\exists$  setDecorationBy-  $\sqsubseteq$  MOVIE

MOVIE  $\sqsubseteq$   $\exists$  setDecorationBy-

$\delta$  (role12)  $\sqsubseteq$  setDecorationBy

(funct role12)

$\exists$  makeupDept  $\sqsubseteq$  PERSON

$\exists$  makeupDept-  $\sqsubseteq$  MOVIE

MOVIE  $\sqsubseteq$   $\exists$  makeupDept-

$\delta$  (role13)  $\sqsubseteq$  makeupDept

(funct role13)

$\exists$  artDept  $\sqsubseteq$  PERSON

$\exists$  artDept-  $\sqsubseteq$  MOVIE

MOVIE  $\sqsubseteq$   $\exists$  artDept-

$\delta$  (role14)  $\sqsubseteq$  artDept

(funct role14)

$\exists$  soundDept  $\sqsubseteq$  PERSON

$\exists$  soundDept-  $\sqsubseteq$  MOVIE

MOVIE  $\sqsubseteq$   $\exists$  soundDept-

$\delta$  (role15)  $\sqsubseteq$  soundDept

(funct role15)

$\exists$  cameraDept  $\sqsubseteq$  PERSON

$\exists$  cameraDept-  $\sqsubseteq$  MOVIE

MOVIE  $\sqsubseteq$   $\exists$  cameraDept-

$\delta$  (role16)  $\sqsubseteq$  cameraDept

(funct role16)

∃ animationDept ⊑ PERSON  
∃ animationDept- ⊑ MOVIE  
MOVIE ⊑ ∃ animationDept-  
δ (role17) ⊑ animationDept  
(funct role17)

∃ castingDept ⊑ PERSON  
∃ castingDept- ⊑ MOVIE  
MOVIE ⊑ ∃ castingDept-  
δ (role18) ⊑ castingDept  
(funct role18)

∃ costumeDept ⊑ PERSON  
∃ costumeDept- ⊑ MOVIE  
MOVIE ⊑ ∃ costumeDept-  
δ (role19) ⊑ costumeDept  
(funct role19)

∃ editorialDept ⊑ PERSON  
∃ editorialDept- ⊑ MOVIE  
MOVIE ⊑ ∃ editorialDept-  
δ (role20) ⊑ editorialDept  
(funct role20)

∃ musicDept ⊑ PERSON  
∃ musicDept- ⊑ MOVIE  
MOVIE ⊑ ∃ musicDept-  
δ (role21) ⊑ musicDept  
(funct role21)

∃ transportationDept ⊑ PERSON  
∃ transportationDept- ⊑ MOVIE  
MOVIE ⊑ ∃ transportationDept-  
δ (role22) ⊑ transportationDept  
(funct role22)

∃ stuntmanDept ⊑ PERSON  
∃ stuntmanDept- ⊑ MOVIE  
MOVIE ⊑ ∃ stuntmanDept-  
δ (role23) ⊑ stuntmanDept  
(funct role23)

∃ specialEffectDept ⊑ PERSON  
∃ specialEffectDept- ⊑ MOVIE  
MOVIE ⊑ ∃ specialEffectDept-

$\delta$  (role24)  $\sqsubseteq$  specialEffectDept

(funct role24)

$\exists$  visualEffectDept  $\sqsubseteq$  PERSON

$\exists$  visualEffectDept-  $\sqsubseteq$  MOVIE

MOVIE  $\sqsubseteq$   $\exists$  visualEffectDept-

$\delta$  (role25)  $\sqsubseteq$  visualEffectDept

(funct role25)

$\exists$  productionManagementDept  $\sqsubseteq$  PERSON

$\exists$  productionManagementDept-  $\sqsubseteq$  MOVIE

MOVIE  $\sqsubseteq$   $\exists$  productionManagementDept-

$\delta$  (role26)  $\sqsubseteq$  productionManagementDept

(funct role26)

$\exists$  assistantDirectorDept  $\sqsubseteq$  PERSON

$\exists$  assistantDirectorDept-  $\sqsubseteq$  MOVIE

MOVIE  $\sqsubseteq$   $\exists$  assistantDirectorDept-

$\delta$  (role27)  $\sqsubseteq$  assistantDirectorDept

(funct role27)

$\exists$  otherCrew  $\sqsubseteq$  PERSON

$\exists$  otherCrew-  $\sqsubseteq$  MOVIE

MOVIE  $\sqsubseteq$   $\exists$  otherCrew-

$\delta$  (role28)  $\sqsubseteq$  otherCrew

(funct role28)

$\exists$  thanksTo  $\sqsubseteq$  PERSON

$\exists$  thanksTo-  $\sqsubseteq$  MOVIE

MOVIE  $\sqsubseteq$   $\exists$  thanksTo-

$\delta$  (role29)  $\sqsubseteq$  thanksTo

(funct role29)

$\exists$  songWrittenBy  $\sqsubseteq$  PERSON

$\exists$  songWrittenBy-  $\sqsubseteq$  SONG

SONG  $\sqsubseteq$   $\exists$  songWrittenBy-

$\exists$  songPerformedBy  $\sqsubseteq$  PERSON

$\exists$  songPerformedBy-  $\sqsubseteq$  SONG

SONG  $\sqsubseteq$   $\exists$  songPerformedBy-

$\exists$  songSingedBy  $\sqsubseteq$  PERSON

$\exists$  songSingedBy-  $\sqsubseteq$  SONG

SONG  $\sqsubseteq$   $\exists$  songSingedBy-

$\exists \text{ award2person} \sqsubseteq \text{AWARD}$   
 $\exists \text{ award2person-} \sqsubseteq \text{PERSON}$   
 $\text{AWARD} \sqsubseteq \exists \text{ award2person}$   
(funct award2person)

$\exists \text{ host} \sqsubseteq \text{CEREMONY}$   
 $\exists \text{ host-} \sqsubseteq \text{PERSON}$   
 $\text{CEREMONY} \sqsubseteq \exists \text{ host}$   
(funct host)

$\text{ACTOR} \sqsubseteq \text{PERSON}$   
 $\text{ACTOR} \sqsubseteq \delta(\text{sex})$   
 $\delta(\text{sex}) \sqsubseteq \text{ACTOR}$   
(funct sex)

$\exists \text{ cast} \sqsubseteq \text{ACTOR}$   
 $\exists \text{ cast-} \sqsubseteq \text{MOVIE}$   
 $\text{MOVIE} \sqsubseteq \exists \text{ cast-}$   
 $\text{cast} \sqsubseteq \delta(\text{character})$   
 $\delta(\text{character}) \sqsubseteq \text{cast}$

#  $\text{CHARACTER} \sqsubseteq \delta(\text{characterName})$   
#  $\delta(\text{characterName}) \sqsubseteq \text{CHARACTER}$   
# (funct characterName)  
#  $\text{CHARACTER} \sqsubseteq \delta(\text{characterSurname})$   
#  $\delta(\text{characterSurname}) \sqsubseteq \text{CHARACTER}$   
# (funct characterSurname)  
#  
#  $\exists \text{ actor2character} \sqsubseteq \text{ACTOR}$   
#  $\exists \text{ actor2character-} \sqsubseteq \text{CHARACTER}$   
# (funct actor2character-)  
#  
#  $\exists \text{ movie2character} \sqsubseteq \text{MOVIE}$   
#  $\exists \text{ movie2character-} \sqsubseteq \text{CHARACTER}$

$\text{MOVIE} \sqsubseteq \delta(\text{movieTitle})$   
 $\delta(\text{movieTitle}) \sqsubseteq \text{MOVIE}$   
(funct movieTitle)  
 $\text{MOVIE} \sqsubseteq \delta(\text{year})$   
 $\delta(\text{year}) \sqsubseteq \text{MOVIE}$

(funct year)  
MOVIE ⊑ δ (genre)  
δ (genre) ⊑ MOVIE  
MOVIE ⊑ δ (tagline)  
δ (tagline) ⊑ MOVIE  
MOVIE ⊑ δ (plotOutline)  
δ (plotOutline) ⊑ MOVIE  
(funct plotOutline)  
MOVIE ⊑ δ (plotSynopsis)  
δ (plotSynopsis) ⊑ MOVIE  
(funct plotSynopsis) ..  
MOVIE ⊑ δ (keyword) ..  
δ (keyword) ⊑ MOVIE  
δ (quotes) ⊑ MOVIE  
MOVIE ⊑ δ (mpaa) ..  
δ (mpaa) ⊑ MOVIE  
MOVIE ⊑ δ (runTime)  
δ (runTime) ⊑ MOVIE  
-- (funct runTime)  
MOVIE ⊑ δ (language)  
δ (language) ⊑ MOVIE  
δ (color) ⊑ MOVIE  
(funct color)  
δ (aspectRatio) ⊑ MOVIE  
(funct aspectRatio)  
δ (laboratory) ⊑ MOVIE  
δ (cinematographicProcess) ⊑ MOVIE  
δ (negativeFormat) ⊑ MOVIE  
δ (printedFormat) ⊑ MOVIE  
δ (parentsGuide) ⊑ MOVIE  
δ (soundMix) ⊑ MOVIE  
--δ (certification) ⊑ MOVIE  
δ (movieTrivia) ⊑ MOVIE  
δ (goofs) ⊑ MOVIE  
δ (tv) ⊑ MOVIE  
(funct tv)  
δ (video) ⊑ MOVIE  
(funct video)  
δ (rating) ⊑ MOVIE  
(funct rating)  
δ (votes) ⊑ MOVIE  
(funct votes)  
δ (certificate) ⊑ MOVIE

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# CERTIFICATE ⊑ δ (certificateName)

```
# δ (certificateName) ⊑ CERTIFICATE
# ∃ certificatedIn ⊑ CERTIFICATE
# ∃ certificatedIn- ⊑ COUNTRY
# CERTIFICATE ⊑ ∃ certificatedIn
# (funct certificatedIn)
# ∃ movie2certificate ⊑ MOVIE
# ∃ movie2certificate- ⊑ CERTIFICATE
# δ (addition) ⊑ movie2certificate
# (funct addition)
```

```
∃ releasedIn ⊑ MOVIE
∃ releasedIn- ⊑ COUNTRY
MOVIE ⊑ ∃ releasedIn
releasedIn ⊑ δ (releaseDate)
δ (releaseDate) ⊑ releasedIn
(funct releaseDate)
releasedIn ⊑ δ (akaTitle)
δ (akaTitle) ⊑ releasedIn
(funct akaTitle)
```

```
∃ producedIn ⊑ MOVIE
∃ producedIn- ⊑ COUNTRY
MOVIE ⊑ ∃ producedIn
```

```
∃ filmedIn ⊑ MOVIE
∃ filmedIn- ⊑ LOCATION
MOVIE ⊑ ∃ filmedIn
```

```
∃ followedBy ⊑ MOVIE
∃ followedBy- ⊑ MOVIE
```

```
∃ remakeOf ⊑ MOVIE
∃ remakeOf- ⊑ MOVIE
```

```
∃ spinOffFrom ⊑ MOVIE
∃ spinOffFrom- ⊑ MOVIE
```

```
∃ references ⊑ MOVIE
∃ references- ⊑ MOVIE
```

```
∃ referencedIn ⊑ MOVIE
∃ referencedIn- ⊑ MOVIE
```

```
∃ features ⊑ MOVIE
∃ features- ⊑ MOVIE
```

∃ featuredIn ⊑ MOVIE

∃ featuredIn- ⊑ MOVIE

∃ soundtrack ⊑ MOVIE

∃ soundtrack- ⊑ SONG

∃ productionCompany ⊑ MOVIE

∃ productionCompany- ⊑ COMPANY

MOVIE ⊑ ∃ productionCompany

δ (role30) ⊑ productionCompany

(funct role30)

∃ distributionCompany ⊑ MOVIE

∃ distributionCompany- ⊑ COMPANY

MOVIE ⊑ ∃ distributionCompany

distributionCompany ⊑ δ (distributionYear)

δ (distributionYear) ⊑ distributionCompany

(funct distributionYear)

distributionCompany ⊑ δ (type)

δ (type) ⊑ distributionCompany

(funct type)

∃ sfxCompany ⊑ MOVIE

∃ sfxCompany- ⊑ COMPANY

MOVIE ⊑ ∃ sfxCompany

δ (role31) ⊑ sfxCompany

(funct role31)

∃ otherCompany ⊑ MOVIE

∃ otherCompany- ⊑ COMPANY

MOVIE ⊑ ∃ otherCompany

δ (role32) ⊑ otherCompany

(funct role32)

∃ award2movie ⊑ AWARD

∃ award2movie- ⊑ MOVIE

AWARD ⊑ ∃ award2movie

(funct award2movie)

TVSERIE ⊑ MOVIE

TVSERIE ⊑ δ (seasonNo)

δ (seasonNo) ⊑ TVSERIE

(funct seasonNo)  
TVSERIE ⊑ δ (episodeNo)  
δ (episodeNo) ⊑ TVSERIE  
(funct episodeNo)  
TVSERIE ⊑ δ (episodeTitle)  
δ (episodeTitle) ⊑ TVSERIE  
(funct episodeTitle)  
TVSERIE ⊑ δ (resume)

LOCATION ⊑ δ (address)  
δ (address) ⊑ LOCATION  
(funct address)  
LOCATION ⊑ δ (pointOfInterest)  
δ (pointOfInterest) ⊑ LOCATION  
(funct pointOfInterest)

∃ loc2city ⊑ LOCATION  
∃ loc2city- ⊑ CITY  
LOCATION ⊑ ∃ loc2city  
(funct loc2city)

∃ located ⊑ CEREMONY  
∃ located- ⊑ LOCATION  
CEREMONY ⊑ ∃ located  
(funct located)

CITY ⊑ δ (cityName)  
δ (cityName) ⊑ CITY  
(funct cityName)  
CITY ⊑ δ (region)  
δ (region) ⊑ CITY  
(funct region)  
CITY ⊑ δ (state)  
δ (state) ⊑ CITY  
(funct state)

∃ city2country ⊑ CITY  
∃ city2country- ⊑ COUNTRY  
CITY ⊑ ∃ city2country  
(funct city2country)

COUNTRY ⊑ δ (countryName)  
δ (countryName) ⊑ COUNTRY

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(funct countryName)

COMPANY  $\sqsubseteq \delta$  (companyName)

$\delta$  (companyName)  $\sqsubseteq$  COMPANY

(funct companyName)

SONG  $\sqsubseteq \delta$  (songTitle)

$\delta$  (songTitle)  $\sqsubseteq$  SONG

(funct songTitle)

$\delta$  (copyrightInfo)  $\sqsubseteq$  SONG

(funct copyrightInfo)

AWARD  $\sqsubseteq \delta$  (category)

$\delta$  (category)  $\sqsubseteq$  AWARD

(funct category)

AWARD  $\sqsubseteq \delta$  (result)

$\delta$  (result)  $\sqsubseteq$  AWARD

(funct result)

AWARD  $\sqsubseteq \delta$  (motivation)

$\delta$  (motivation)  $\sqsubseteq$  AWARD

(funct motivation)

$\exists$  award2ceremony  $\sqsubseteq$  AWARD

$\exists$  award2ceremony-  $\sqsubseteq$  CEREMONY

AWARD  $\sqsubseteq \exists$  award2ceremony

(funct award2ceremony)

CEREMONY  $\sqsubseteq \delta$  (ceremonyDate)

$\delta$  (ceremonyDate)  $\sqsubseteq$  CEREMONY

(funct ceremonyDate)

CEREMONY  $\sqsubseteq \delta$  (awardType)

$\delta$  (awardType)  $\sqsubseteq$  CEREMONY

(funct awardType)

CEREMONY  $\sqsubseteq \delta$  (academy)

$\delta$  (academy)  $\sqsubseteq$  CEREMONY

(funct academy)

$\rho$  (name)  $\sqsubseteq$  xsd: string

$\rho$  (surname)  $\sqsubseteq$  xsd: string

$\rho$  (birthDate)  $\sqsubseteq$  xsd: date

$\rho$  (birthName)  $\sqsubseteq$  xsd: string

$\rho$  (trademark)  $\sqsubseteq$  xsd: string

p (trivia) ⊑ xsd: string  
p (movieTrivia) ⊑ xsd: string  
p (personalQuotes) ⊑ xsd: string  
p (miniBiography) ⊑ xsd: string  
p (height) ⊑ xsd: string  
p (nick) ⊑ xsd: string  
p (lastAppearance) ⊑ xsd: string  
p (alternateNames) ⊑ xsd: string  
p (otherWorks) ⊑ xsd: string  
p (money) ⊑ xsd: string  
p (year) ⊑ xsd: int  
p (genre) ⊑ xsd: string  
p (tagline) ⊑ xsd: string  
p (plotOutline) ⊑ xsd: string  
p (plotSynopsis) ⊑ xsd: string  
p (plotKeyword) ⊑ xsd: string  
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p (runTime) ⊑ xsd: int  
p (color) ⊑ xsd: string  
p (camera) ⊑ xsd: string  
p (laboratory) ⊑ xsd: string  
p (language) ⊑ xsd: string  
p (parentsGuide) ⊑ xsd: string  
p (negativeFormat) ⊑ xsd: string  
p (printedFormat) ⊑ xsd: string  
p (aspectRatio) ⊑ xsd: string  
p (soundMix) ⊑ xsd: string  
p (certificate) ⊑ xsd: string  
p (tv) ⊑ xsd: string  
p (video) ⊑ xsd: string  
p (goofs) ⊑ xsd: string  
p (quotes) ⊑ xsd: string  
p (cinematographicProcess) ⊑ xsd: string  
p (seasonNo) ⊑ xsd: int  
p (episodeNo) ⊑ xsd: int  
p (episodeTitle) ⊑ xsd: string  
p (resume) ⊑ xsd: string  
p (originalAirDate) ⊑ xsd: date  
p (address) ⊑ xsd: string  
p (pointOfInterest) ⊑ xsd: string  
p (region) ⊑ xsd: string  
p (state) ⊑ xsd: string  
p (movieTitle) ⊑ xsd: string  
p (songTitle) ⊑ xsd: string  
p (copyrightInfo) ⊑ xsd: string

p (sex) ⊑ xsd: string  
p (category) ⊑ xsd: string  
p (result) ⊑ xsd: string  
p (motivation) ⊑ xsd: string  
p (awardType) ⊑ xsd: string  
p (academy) ⊑ xsd: string  
p (type) ⊑ xsd: string  
p (akaname) ⊑ xsd: string  
p (distributionYear) ⊑ xsd: int  
p (releaseDate) ⊑ xsd: date  
p (ceremonyDate) ⊑ xsd: date  
p (cityName) ⊑ xsd: string  
p (countryName) ⊑ xsd: string  
p (companyName) ⊑ xsd: string  
p (characterName) ⊑ xsd: string  
p (characterSurname) ⊑ xsd: string  
p (role1) ⊑ xsd: string  
p (role2) ⊑ xsd: string  
p (role3) ⊑ xsd: string  
p (role4) ⊑ xsd: string  
p (role5) ⊑ xsd: string  
p (role6) ⊑ xsd: string  
p (role7) ⊑ xsd: string  
p (role8) ⊑ xsd: string  
p (role9) ⊑ xsd: string  
p (role10) ⊑ xsd: string  
p (role11) ⊑ xsd: string  
p (role12) ⊑ xsd: string  
p (role13) ⊑ xsd: string  
p (role14) ⊑ xsd: string  
p (role15) ⊑ xsd: string  
p (role16) ⊑ xsd: string  
p (role17) ⊑ xsd: string  
p (role18) ⊑ xsd: string  
p (role19) ⊑ xsd: string  
p (role20) ⊑ xsd: string