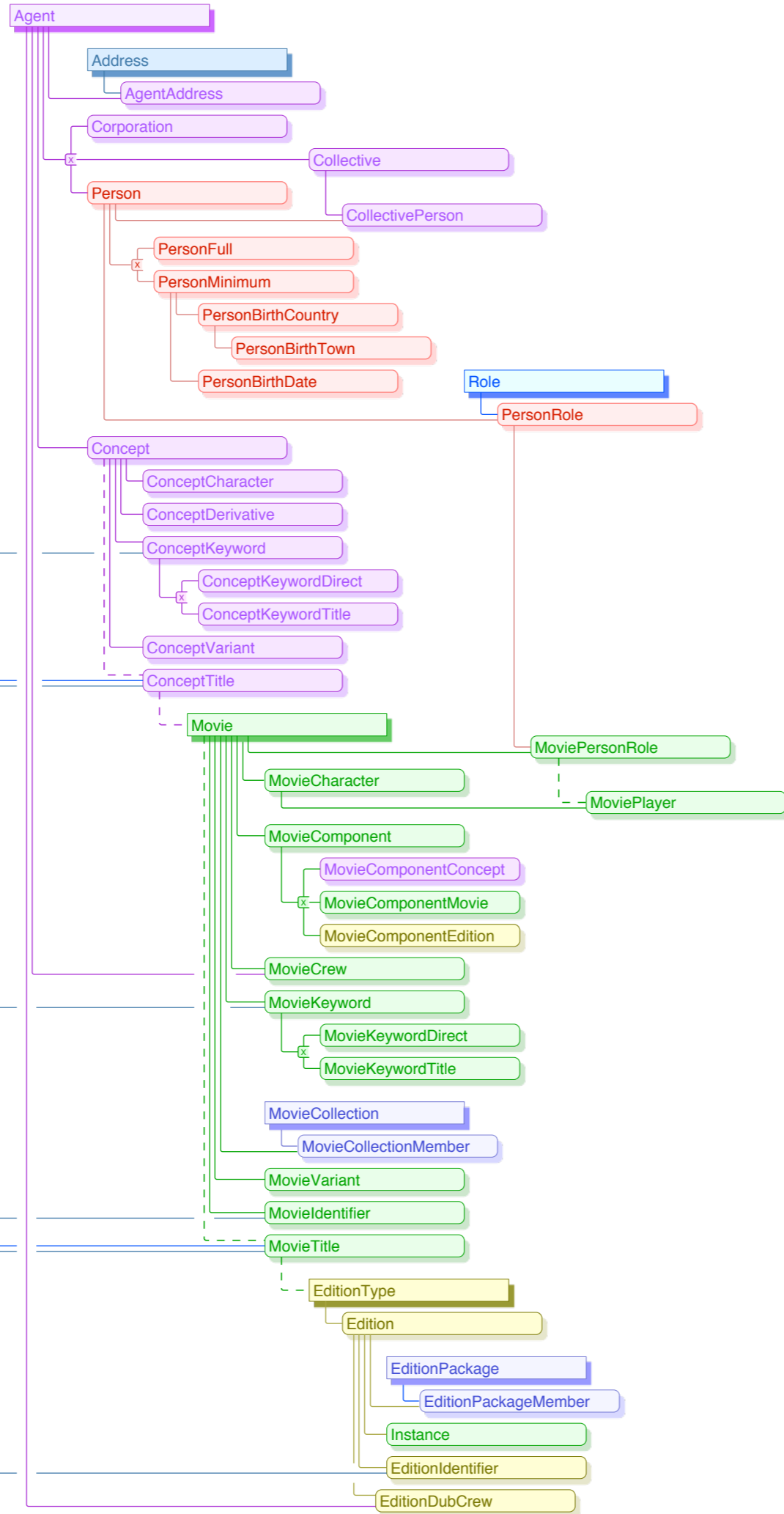
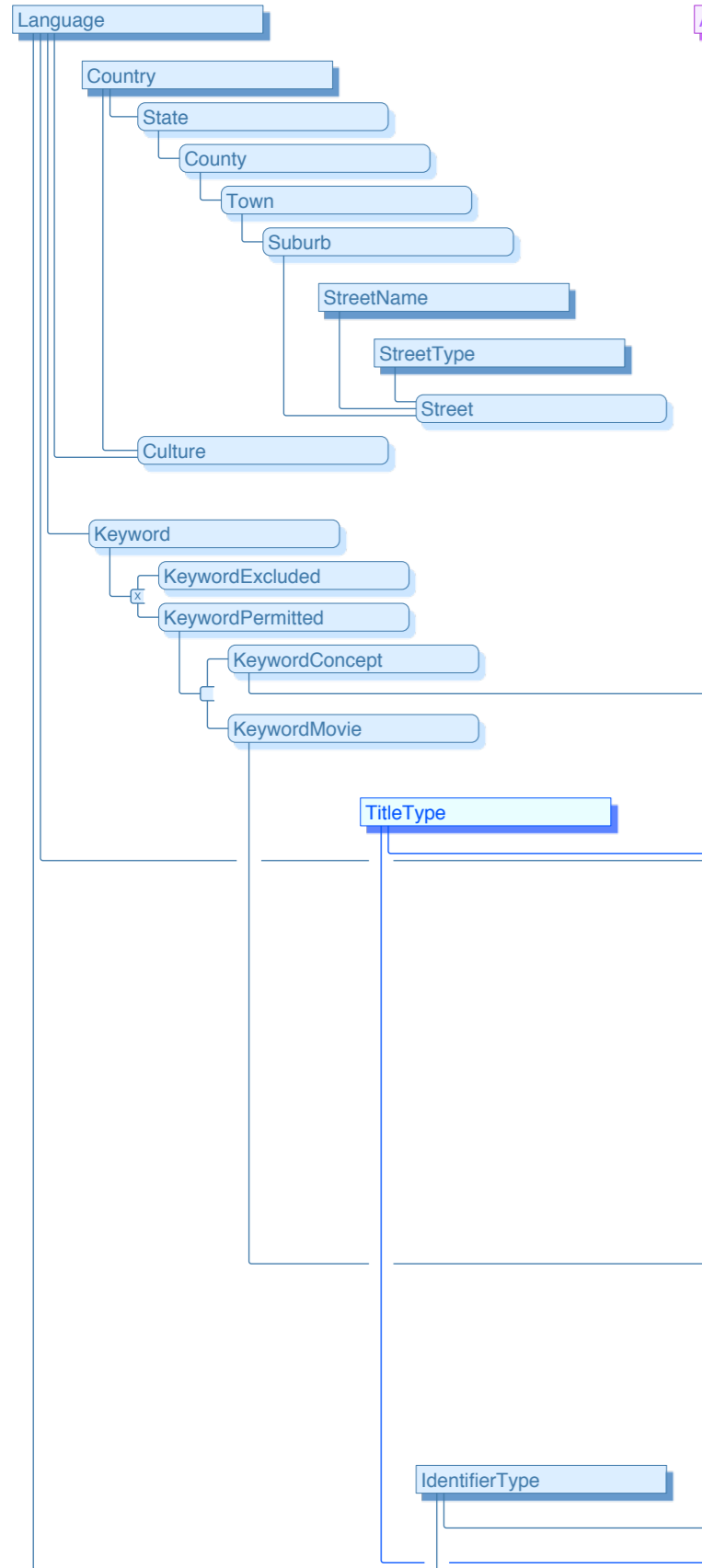


The Hierarchy



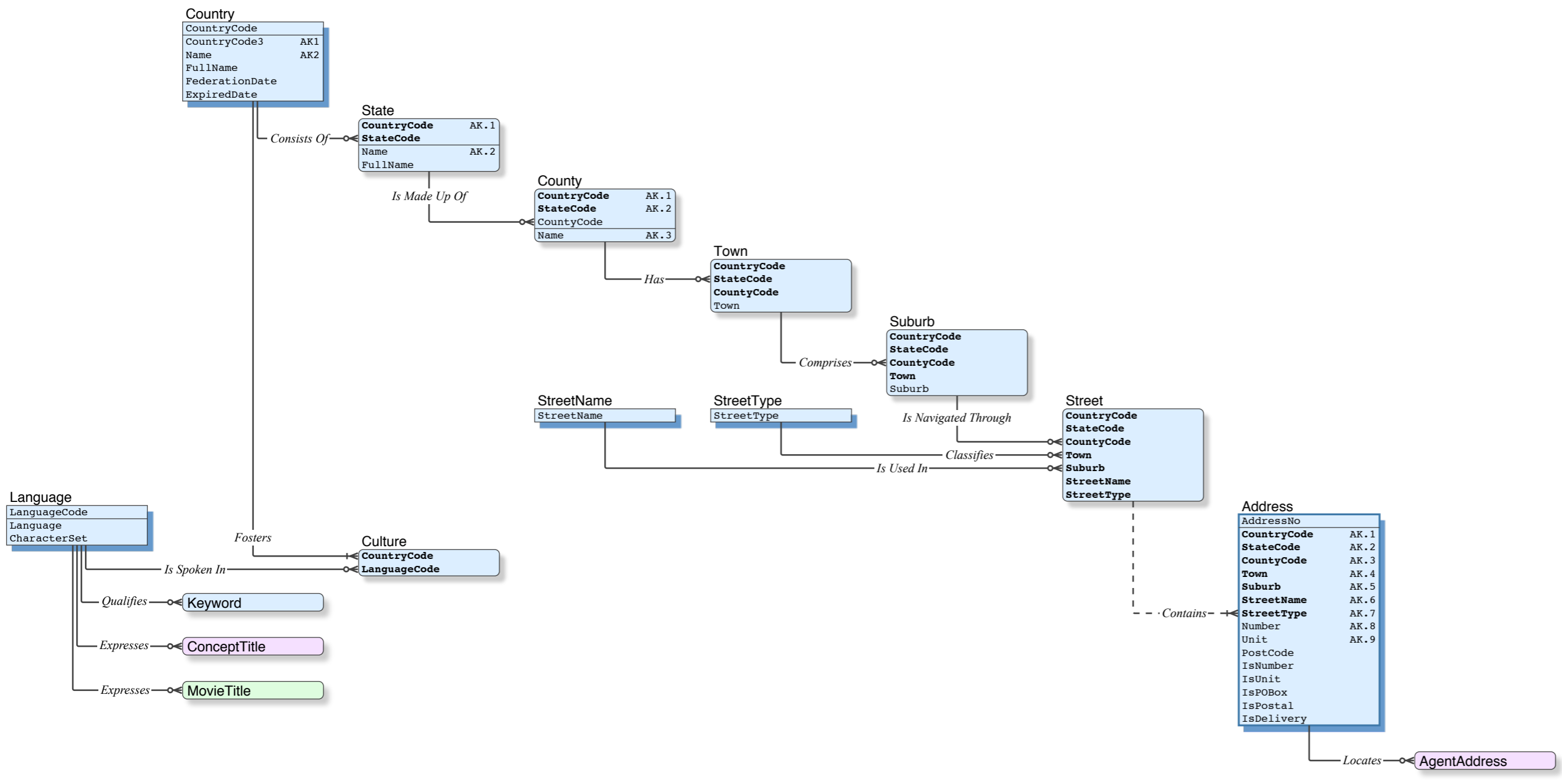
Alphabetic

A Address	M MediumType
Agent	Movie
AgentAddress	MovieCharacter
AgentType	MovieCollection
C Collective	MovieCollectionMember
CollectivePerson	MovieComponent
Concept	MovieComponentConcept
ConceptCharacter	MovieComponentEdition
ConceptDerivative	MovieComponentMovie
ConceptKeyword	MovieComponentType
ConceptKeywordDirect	MovieCrew
ConceptKeywordTitle	MovieIdentifier
ConceptTitle	MovieKeyword
ConceptVariant	MovieKeywordDirect
Corporation	MovieKeywordTitle
Country	MoviePersonRole
Culture	MoviePlayer
County	MovieTitle
CrewRole	MovieVariant
E Edition	P Person
EditionDubCrew	PersonBirthCountry
EditionIdentifier	PersonBirthDate
EditionPackage	PersonBirthTown
EditionPackageMember	PersonFull
EditionType	PersonMinimum
I IdentifierType	PersonRole
Instance	PersonType
K Keyword	Purpose
KeywordConcept	R Role
KeywordExcluded	S StreetName
KeywordMovie	State
KeywordObjectType	Street
KeywordPermitted	StreetType
KeywordType	Suburb
L Language	T TitleStatus
	TitleType
	Town

Reference

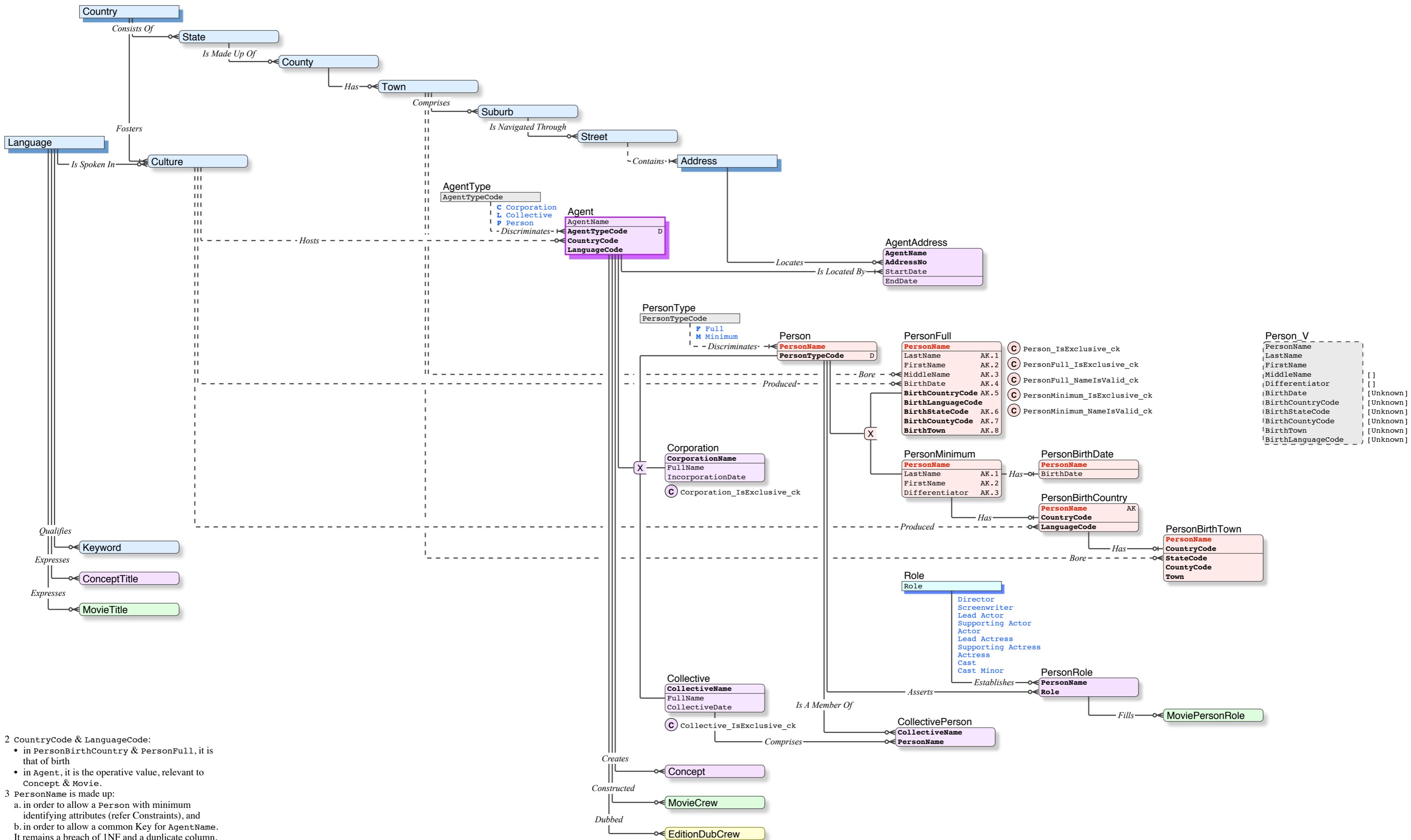
- AgentType
- CrewRole
- KeywordObjectType
- KeywordType
- MediumType
- MovieComponentType
- PersonType
- Purpose
- TitleStatus

- In Relational terms, the Hierarchies are the search vectors
- In the "Dimension-Fact" paradigm, they are the Dimensions



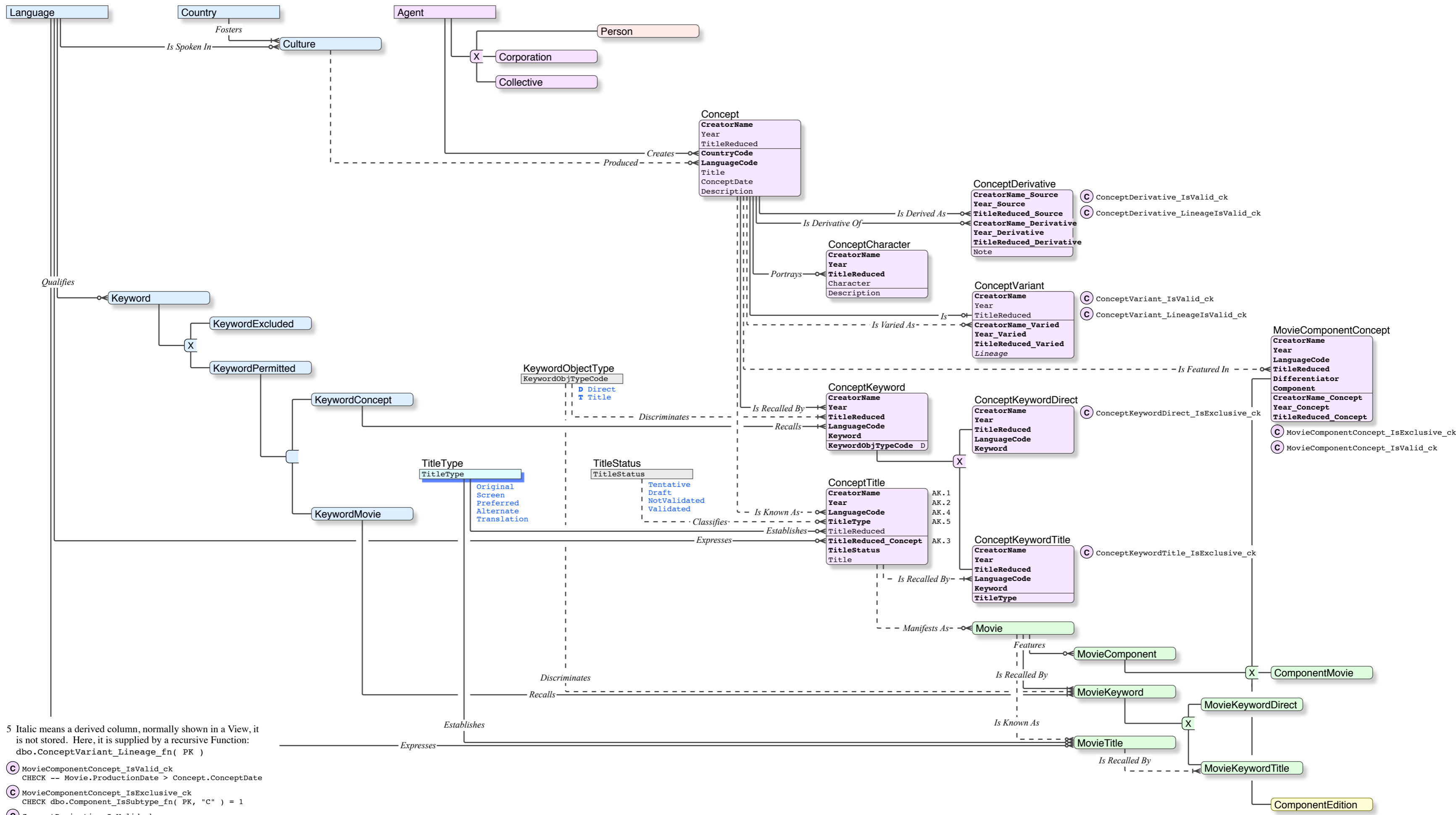
1 All *Codes in the Country cluster are ISO or ANSI/FIPS Standard codes.

Index • Contextual (Table Relation) Country Concept
Index • Textual (Hierarchy & Alphabetic) Keyword Movie
Keyword Edition



- 2 CountryCode & LanguageCode:
- in PersonBirthCountry & PersonFull, it is that of birth
 - in Agent, it is the operative value, relevant to Concept & Movie.
- 3 PersonName is made up:
- in order to allow a Person with minimum identifying attributes (refer Constraints), and
 - in order to allow a common Key for AgentName. It remains a breach of INF and a duplicate column.
- 4 Differentiator (all instances) is a meaningful value, supplied by the user, not the system.
- PersonMinimum: if the middle name or initial is known, it is preferred.
- (C) Collective_IsExclusive_ck
CHECK dbo.Agent_IsSubtype_fn(PK, "L") = 1
- (C) Corporation_IsExclusive_ck
CHECK dbo.Agent_IsSubtype_fn(PK, "C") = 1

Concept



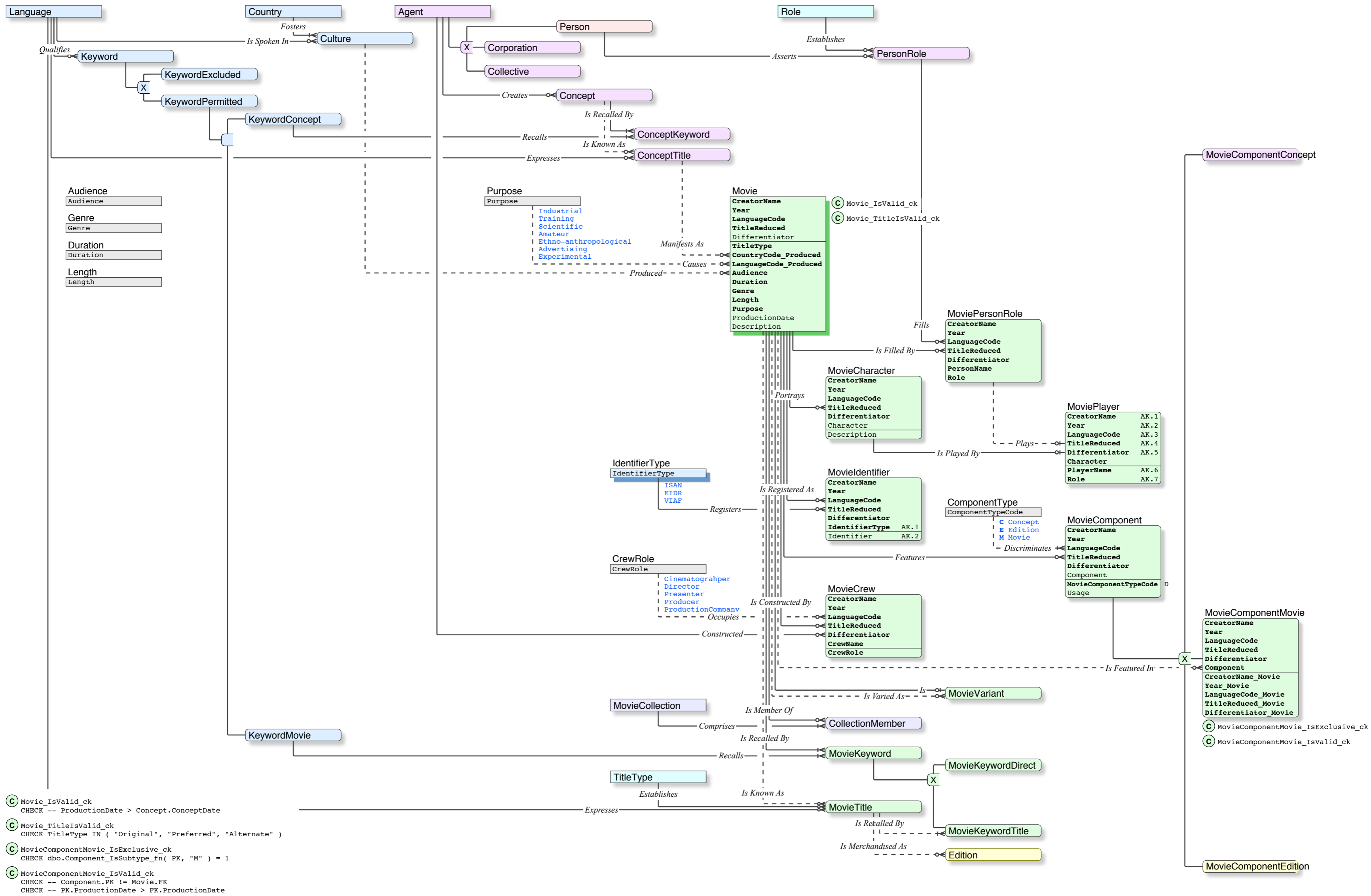
5 Italic means a derived column, normally shown in a View, it is not stored. Here, it is supplied by a recursive Function: `dbo.ConceptVariant_Lineage_fn(PK)`

- Ⓢ MovieComponentConcept_IsValid_ck
CHECK -- Movie.ProductionDate > Concept.ConceptDate
- Ⓢ MovieComponentConcept_IsExclusive_ck
CHECK dbo.Component_IsSubtype_fn(PK, "C") = 1
- Ⓢ ConceptDerivative_IsValid_ck
CHECK -- Derivative.ConceptDate > Derived.ConceptDate
- Ⓢ ConceptDerivative_LineageIsValid_ck
CHECK -- PK NOT IN dbo.ConceptDerivative_Lineage_fn(PK)
- Ⓢ ConceptKeywordDirect_IsExclusive_ck
CHECK dbo.ConceptKeyword_IsSubtype_fn(PK, "D") = 1
- Ⓢ ConceptKeywordTitle_IsExclusive_ck
CHECK dbo.ConceptKeyword_IsSubtype_fn(PK, "T") = 1
- Ⓢ ConceptVariant_IsValid_ck
CHECK -- Variant.ConceptDate > Varied.ConceptDate
- Ⓢ ConceptVariant_LineageIsValid_ck
CHECK -- PK NOT IN dbo.ConceptVariant_Lineage_fn(PK)

Movie 1

Index • Contextual (Table Relation)
Index • Textual (Hierarchy & Alphabetic)

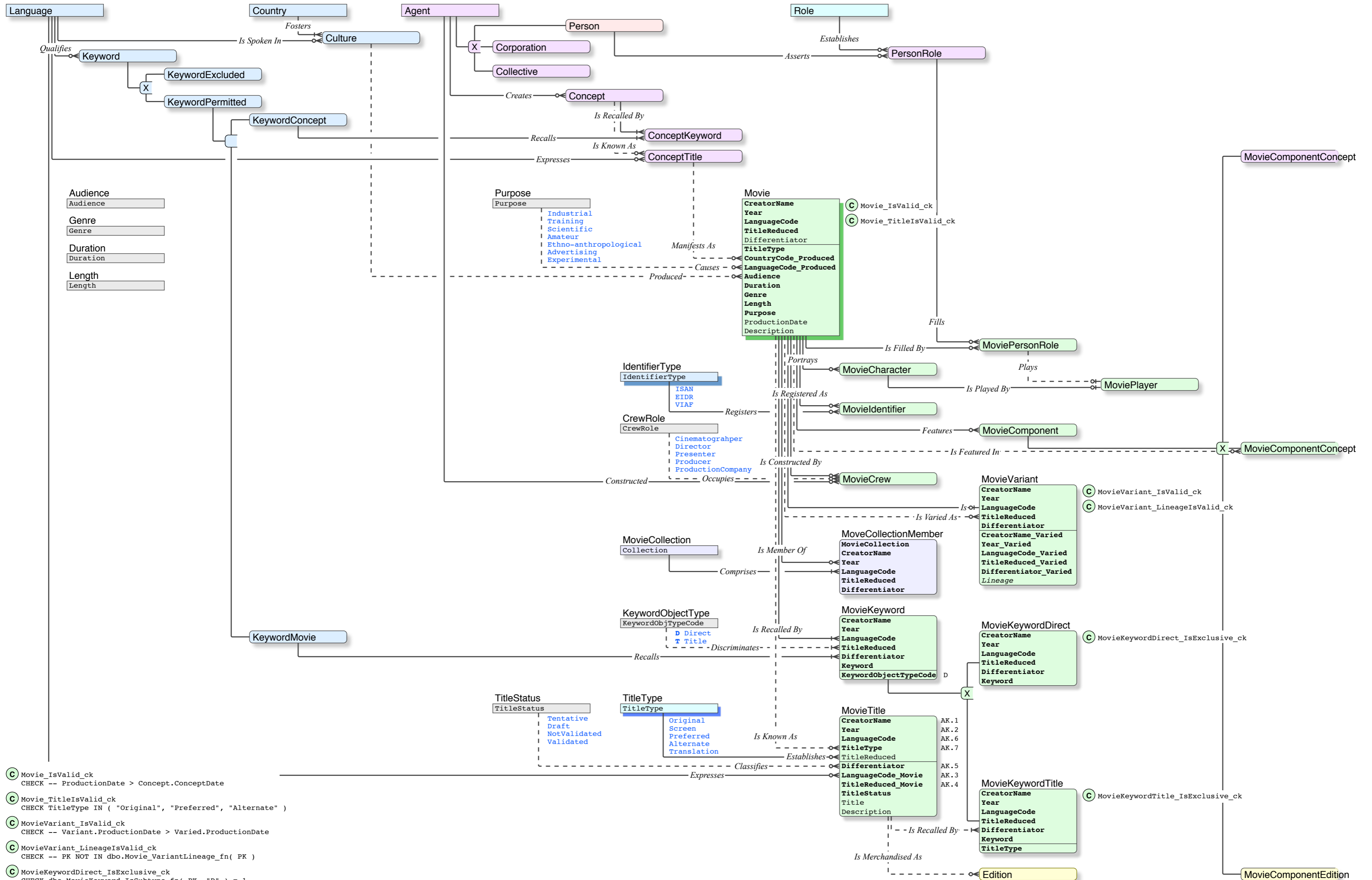
Country
Agent
Keyword
Concept
Movie 2
Edition

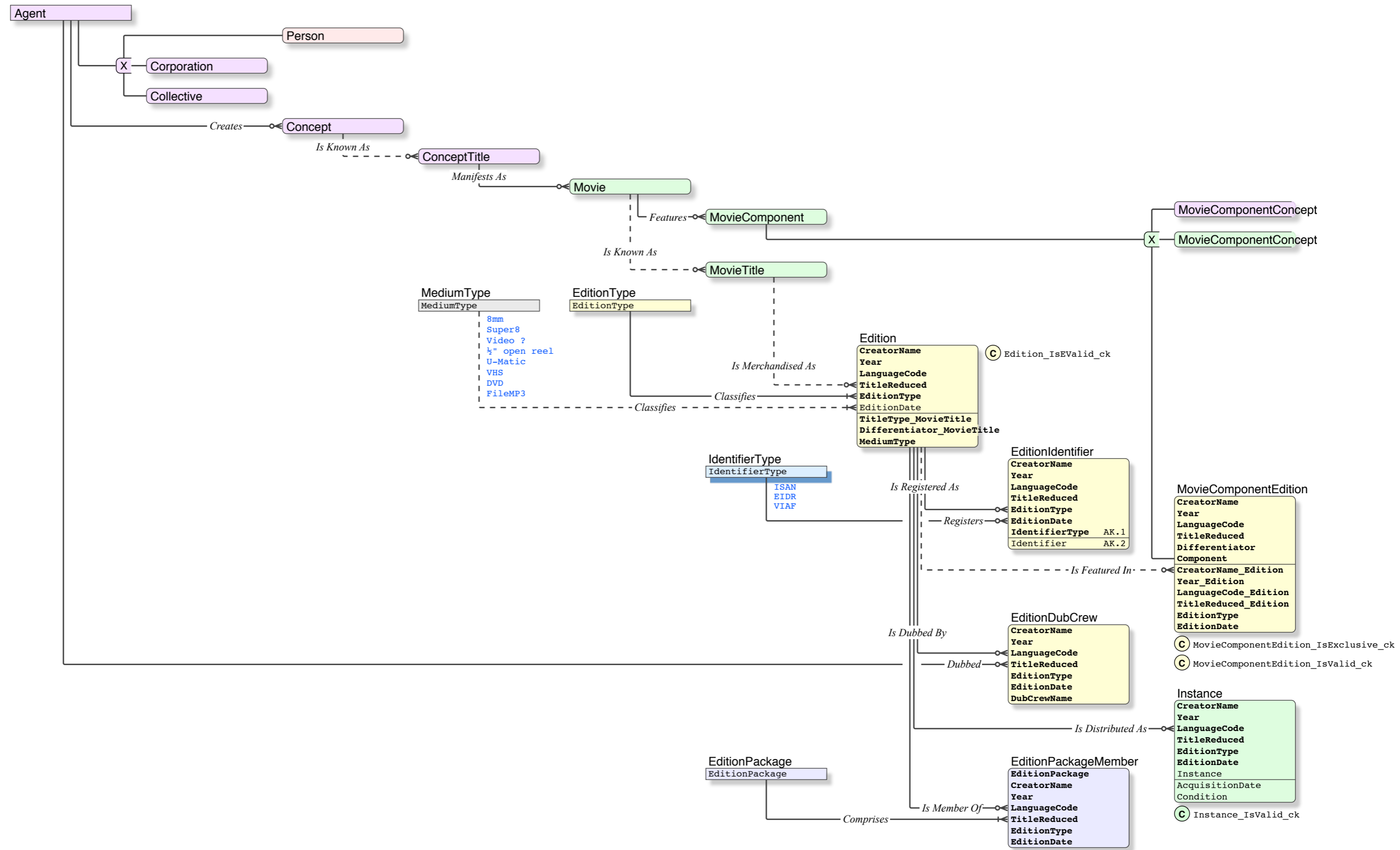


Movie 2

Index • Contextual (Table Relation)
Index • Textual (Hierarchy & Alphabetic)

Country
Agent
Keyword
Concept
Movie 1
Edition





6 Whereas MediumType & FormatType are physical (sensible) classifications, EditionType is a Logical (intelligible) classification.

Ⓢ MovieComponentEdition_IsExclusive_ck
CHECK dbo.Component_IsSubtype_fn(PK, "E") = 1

Ⓢ MovieComponentEdition_IsValid_ck
CHECK -- Movie.ProductionDate > Edition.Edition

Ⓢ Edition_IsValid_ck
CHECK -- EditionDate > Movie.ProductionDate

Ⓢ Instance_IsValid_ck
CHECK -- AcquisitionDate > EditionDate