

## DMN Simulation with List

### Item Definition and Input Data

- Define an Item Definition "Search" with two string attribute: "Classification" and "Genre", each attribute defined Allowed Values, which is used for auto-completion and validation.
- Create an InputData "My Search" typed to Item Definition "Search". Give values for "Classification" and "Genre".

ItemDefinition (Search)			
	Search	Classification : string	"PG", "G", "M"
		Genre : string	"Fantasy", "Action", "Adventure", "Kids & Family"

InputData (My Search)			
	Search	Classification : string	"PG"
		Genre : string	"Fantasy"

### Decision Tables returning list as collection of values

- Hit Policy: Collection
- Business Knowledge Model defined a parameter Classification, used as input clause of the decision table.
- Based on a Classification value, the decision table returns a list containing outputs of multiple hits.

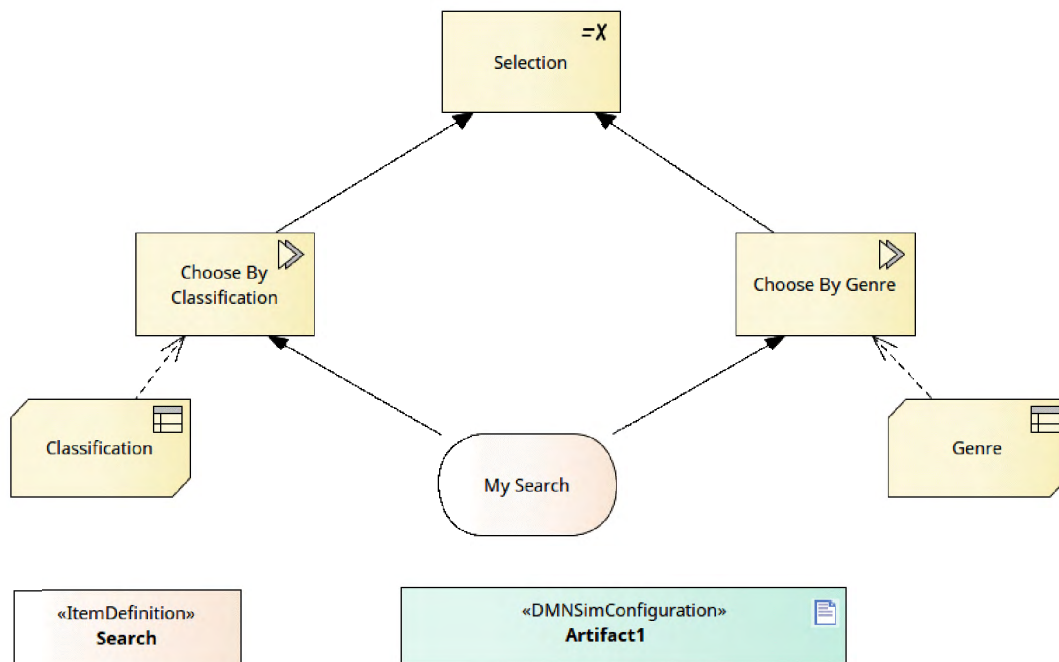
Classification		Input Parameter Values for Simulation	
		( Classification = PG )	
	C	Classification	Film
		PG	[Harry Potter,Frozen,Beauty and the Beast]
	1	M	Avatar
	2	M	Titanic
	3	M	Star Wars
	4	M	Jurassic World
	5	M	The Avengers
	6	M	Furious 7
	7	PG	Harry Potter
	8	PG	Frozen
	9	PG	Beauty and the Beast
	10	M	Transformers

- Hit Policy: Collection
- Business Knowledge Model defined a parameter Genre, used as input clause of the decision table.
- Based on a Genre value, the decision table returns a list containing outputs of multiple hits.

Genre		Input Parameter Values for Simulation	
		( Genre = Fantasy )	
	C	Genre	Film
		Fantasy	[Avatar,Harry Potter,Beauty and the Beast]
	1	Fantasy	Avatar
	2	Drama	Titanic
	3	Adventure	Star Wars
	4	Action	Jurassic World
	5	Action	The Avengers
	6	Action	Furious 7
	7	Fantasy	Harry Potter
	8	Kids & Family	Frozen
	9	Fantasy	Beauty and the Beast
	10	Action	Transformers

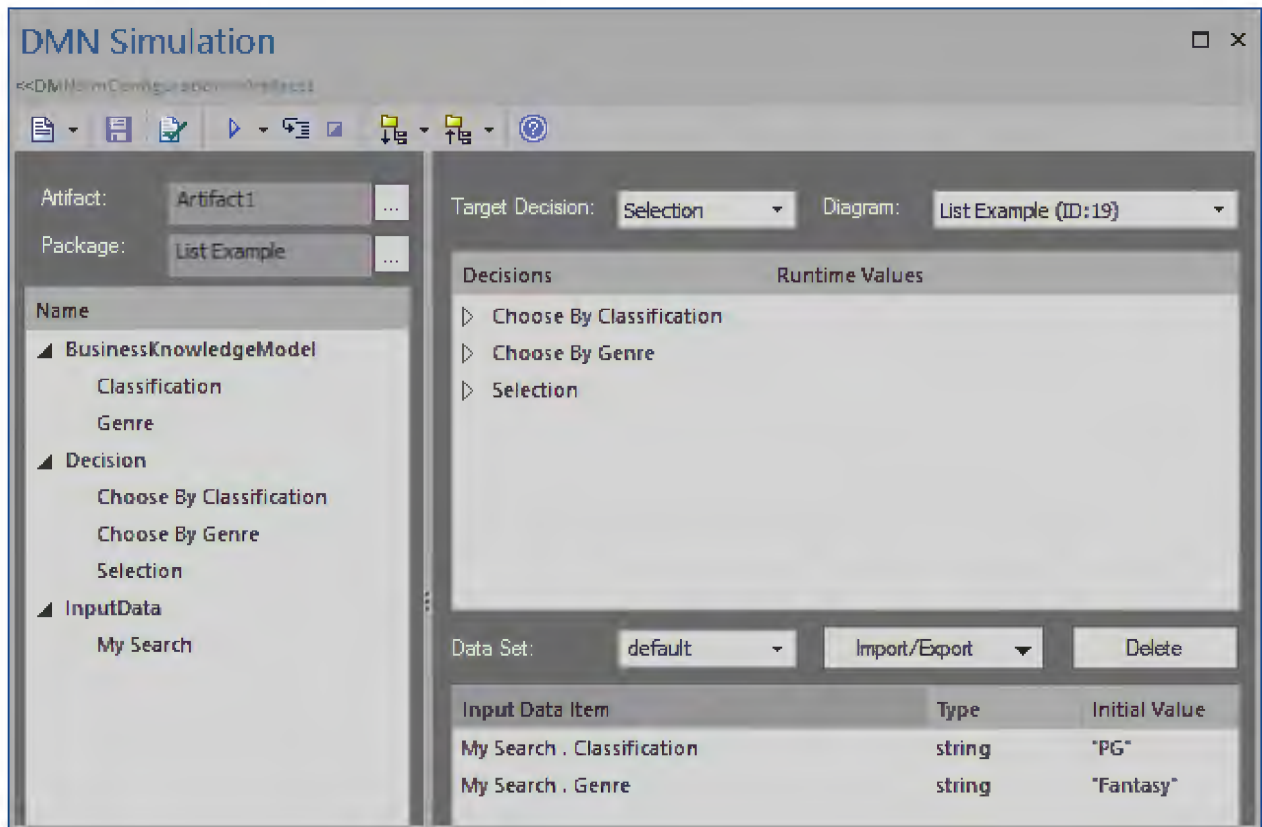
## DRG Diagram to perform a simple Film Query

- Decisions "Choose By Classification" invoke BKM "Classification" by binding "My Search . Classification" to the parameter
- Decisions "Choose By Genre" invoke BKM "Genre" by binding "My Search . Genre" to the parameter
- Decision "Selection" is a literal expression: `intersect(Choose By Classification, Choose By Genre)`
- function "intersect" is defined in DMN Library, it will return a new list containing the intersection values of all list parameters.



## Simulation

- Create a DMNSimConfiguration element, double click to open it, choose "Selection" as Target Decision
- Use the "Run" or "Step" button on the toolbar to play with the simulation



- The result of each decision will be displayed on the diagram.
- In this example, two movies "Harry Potter", "Beauty and the Beast" satisfy my search criteria.

