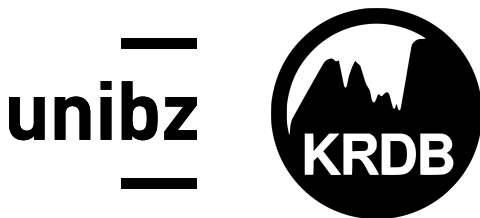# Data and Process Modelling

Lab1. The NORMA Visual Studio Plug-In

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Compact Disc Retailer (from Halpin's Book)

A Compact Disc Retailer needs an Information System to maintain information about CDs. Three kinds of information must be considered: musical content, warehouse, sales.

Examples of facts to be stored.

cd#: 654321-2		name: Special Oldies	
artist:		record company: EMI	

track#	title	duration	singers
1	Maya's Dance	225	Donovan
2	Wonderful Land	200	
3	King of the Trees	340	Cat Stevens
4	Sultans of Swing	240	Mark Knopfler
5	Seven Wonders	300	Stevie Nicks
...	...	...	...

cd#: 925838-2		name: Fleetwood Mac Greatest Hits	
artist: Fleetwood Mac		record company: Warner Bros	

track#	title	duration	singers
1	Say You Love Me	200	Chris McVie, Stevie Nicks
2	Seven Wonders	300	Stevie Nicks
...	...	...	...

Requirements

- The retailer identifies each CD by a number.
- Each CD has a name. Many CDs could have the same name.
- Each CD contains many items, called "tracks". In the CD, each track has a sequence number.
- In principle, two tracks could have the same name.
- Each track has exactly one duration, expressed in seconds.
- Each CD has a current stock quantity and a recommended retail price (stored in US dollars).
  - ▶ We focus only on "present" information. How to model historical information?

CD#	CD name	Stock qty	RRP
654321-2	Special Oldies	5	17.95
792542-2	The Other Side of the Mirror	100	25.00
836419-2	Money for Nothing	10	20.00
925838-2	Fleetwood Mac Greatest Hits	50	23.95
…	…	…	…

Requirements

- Also information about the sales must be considered.
- We consider only the sales of the present year.
  - How to model historical information?
- Sales are registered on a per-month basis.
- Note: new CDs could be acquired during the year (e.g., "The Other Side of the Mirror" was acquired in February).
- Note: How to model the total "profit" earned each month?

Month	CD#	CD name	Qty sold	Net revenue
Jan	654321-2	Special Oldies	0	0.00
	836419-2	Money for Nothing	30	180.00
	925838-2	Fleetwood Mac Greatest Hits	50	400.00
			80	580.00
Feb	654321-2	Special Oldies	5	33.50
	792542-2	The Other Side of the Mirror	70	630.00
	836419-2	Money for Nothing	15	90.00
	925838-2	Fleetwood Mac Greatest Hits	50	350.00
			140	1103.5
				0