MATRIX

TINY DATABASE
One WHAT;
many HOWs

Creature			Skill (code and description)				
			A	E	O	U	Z
id	name	type	Float	Swim	Sink	Walk on Water	Gargle
1	Bannon	Person	1	3			3
2	Myers	Person	3				
3	Neff	Person	2				1
4	Neff	Person	2	2			
5	Mieska	Person					3
6	Carlis	Person					
7	Kermit	Frog		1			
8	Godzilla	Monster			1		

Creature: C_id, C_name, C_type

Skill: S_code, S_description
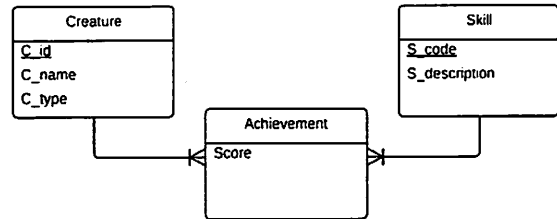
Achievement: Score

RECTANGLE

Creature

C_id	C_name	C_type
1	Bannon	Person
2	Myers	Person
3	Neff	Person
4	Neff	Person
5	Mieska	Person
6	Carlis	Person
7	Kermit	Frog
8	Godzilla	Monster

Skill

S_code	S_description
A	Float
E	Swim
O	Sink
U	Walk on Water
Z	Gargle

Achievement

C_id	S_code	Score
1	A	1
1	E	3
1	Z	3
2	A	3
3	A	2
3	Z	1
4	A	2
4	E	2
5	Z	3
7	E	1
8	O	1

1 GOOD
2 FAIR
3 POOR

Flipped Rectangle

S_code	A	E	O	U	Z
S_description	Float	Swim	Sink	Walk on Water	Gargle

TREE

Creature plus Skills and Scores TABLE

C_id	C_name	C_type	Achievements: (S_code, Score) pairs
1	Bannon	Person	(A,1),(E,3),(Z,3)
2	Myers	Person	(A,3)
3	Neff	Person	(A,2),(Z,1)
4	Neff	Person	(A,2),(E,2)
5	Mieska	Person	(Z,3)
6	Carlis	Person	
7	Kermit	Frog	(E,1)
8	Godzilla	Monster	(O,1)

Skill

S_code	S_description
A	Float
E	Swim
O	Sink
U	Walk on Water
Z	Gargle

TREE [Implicit C_id]

Creature plus Skills and Scores TABLE

C_name	C_type	Achievements: (S_code, Score) pairs
Bannon	Person	(A,1),(E,3),(Z,3)
Myers	Person	(A,3)
Neff	Person	(A,2),(Z,1)
Neff	Person	(A,2),(E,2)
Mieska	Person	(Z,3)
Carlis	Person	
Kermit	Frog	(E,1)
Godzilla	Monster	(O,1)

Skill

S_code	S_description
A	Float
E	Swim
O	Sink
U	Walk on Water
Z	Gargle

PLUS: pointer structures; XML, etc.

Common Errors
in Reading and Building a Data Model

John Carlis

A. Errors in Reading an LDS

Plural, not singular

{Descriptor} = {attribute}, and not   {Descriptor} = {atribute} U {link}

Identify versus describe

Identifier versus identifying descriptor

A bar is a bar

One link, not two

B. Poorly - Formed LDS Errors

Missing Identifier

Plural Name

Repeated Names

Unlabeled 1 and 1 relationship

C. Semantic Errors

Poor name

Poor identifier

Unexamined degree of 1

Wrong level of detail

D. Process Errors

Start with an entity per word

Wrong purpose

Wrongly promote attribute to entity