Business Training Services

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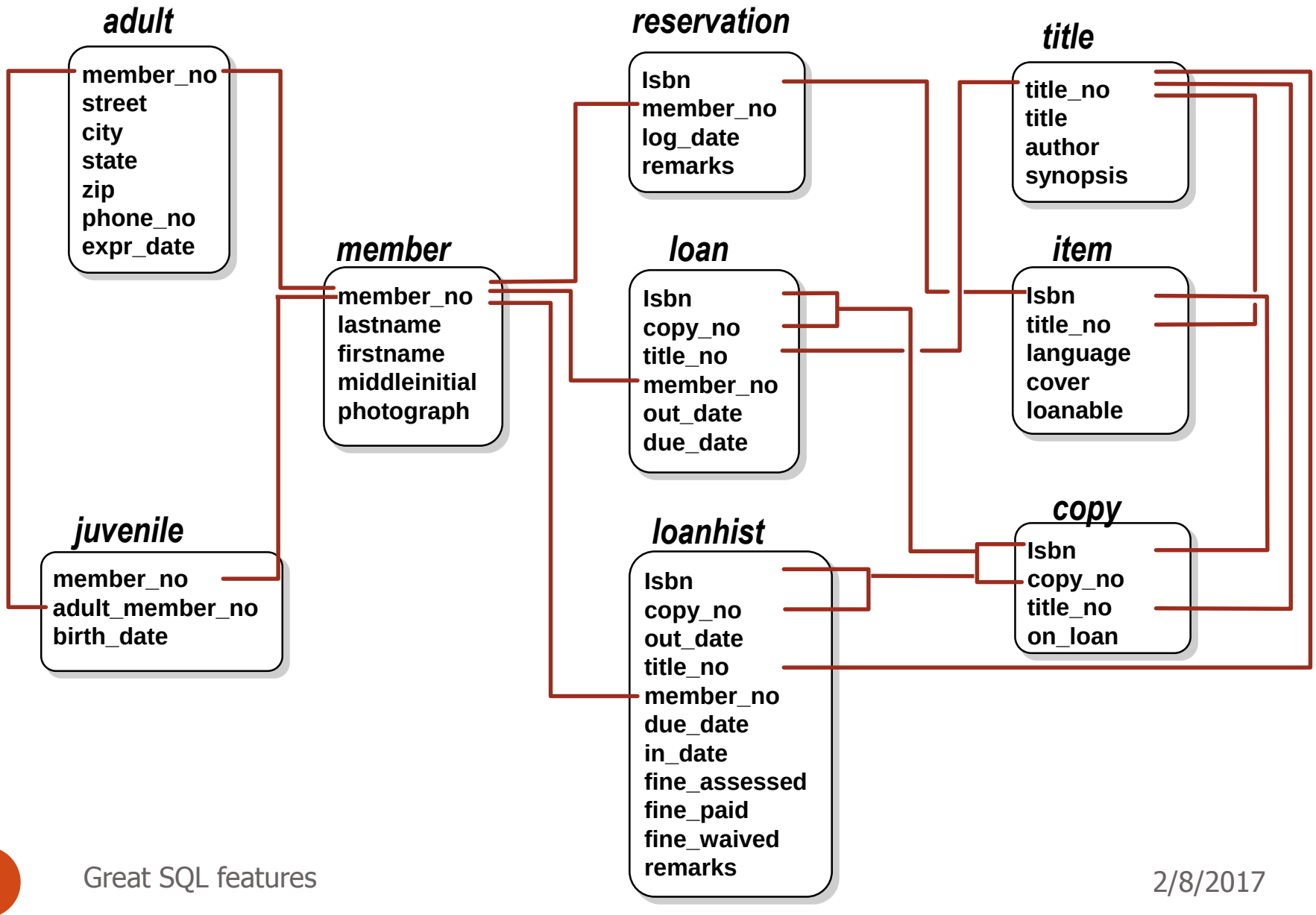
Lab 2

Creating Entity-Relationship Diagram


adult
member_no
street
city
state
zip
phone_no
expr_date
reservation
Isbn
member_no
log_date
remarks
title
title_no
title
author
synopsis
member
member_no
lastname
firstname
middleinitial
photograph
loan
Isbn
copy_no
title_no
member_no
out_date
due_date
item
Isbn
title_no
language
cover
loanable
juvenile
member_no
adult_member_no
birth_date
loanhist
Isbn
copy_no
out_date
title_no
member_no
due_date
in_date
fine_assessed
fine_paid
fine_waived
remarks
copy
Isbn
copy_no
title_no
on_loan

member

member_no	*lastname*	*firstname*	*middle_i*	*photo*
PK	NN	NN		
1	Anderson	Andrew	A	~~~
2	Barr	Andrew	R	~~~
3	Barr	Bill	NULL	~~~
4	Anderson	Bill	B	
5	Anderson	Sally	A	~~~
6	Henson	Jack	NULL	~~~

adult

member_no	*street*	*city*	*state*	*zip*	*phone_no*	*expr_date*
PK, FK	NN	NN	NN	NN		NN
1	Elm St	Seattle	WA	98022	NULL	Jun 06 1992
2	Bowery Ave	Seattle	WA	98022	(206)555-1212	Aug 07 1992
6	Bowery Ave	Kent	WA	98206	NULL	Mar 03 1993

juvenile

member_no	*adult_member_no*	*birth_date*
PK, FK	FK, NN	NN
3	2	Jun 01 1980
4	1	Mar 01 1978
5	1	Nov 05 1982

title

title_no	*title*	*author*	*synopsis*
PK	NN	NN	
1	Gone With the Wind	Mitchell	~~~
2	Color Purple	Walker	~~~
3	Hotel	Hailey	
4	Winnie the Pooh	Milne	~~~

item

isbn	*title_no*	*language*	*cover*	*loanable*
PK	FK, NN			
1	1	English	softback	Y
2	2	French	NULL	N
3	3	French	hardback	Y
4	4	NULL	hardback	NULL
5	2	English	softback	Y

copy

isbn	*copy_no*	*title_no*	*on_loan*
PK, FK	PK	FK, NN	NN
1	1	1	Y
1	2	1	Y
2	1	2	N
3	1	3	Y
4	1	4	Y
4	2	4	Y

reservation

isbn	member_no	log_date	state	remarks
PK,FK	PK, FK		NN	
1	2	3/7/1992	WA	~~~
1	3	NULL	WA	NULL
4	3	3/17/1992	WA	~~~

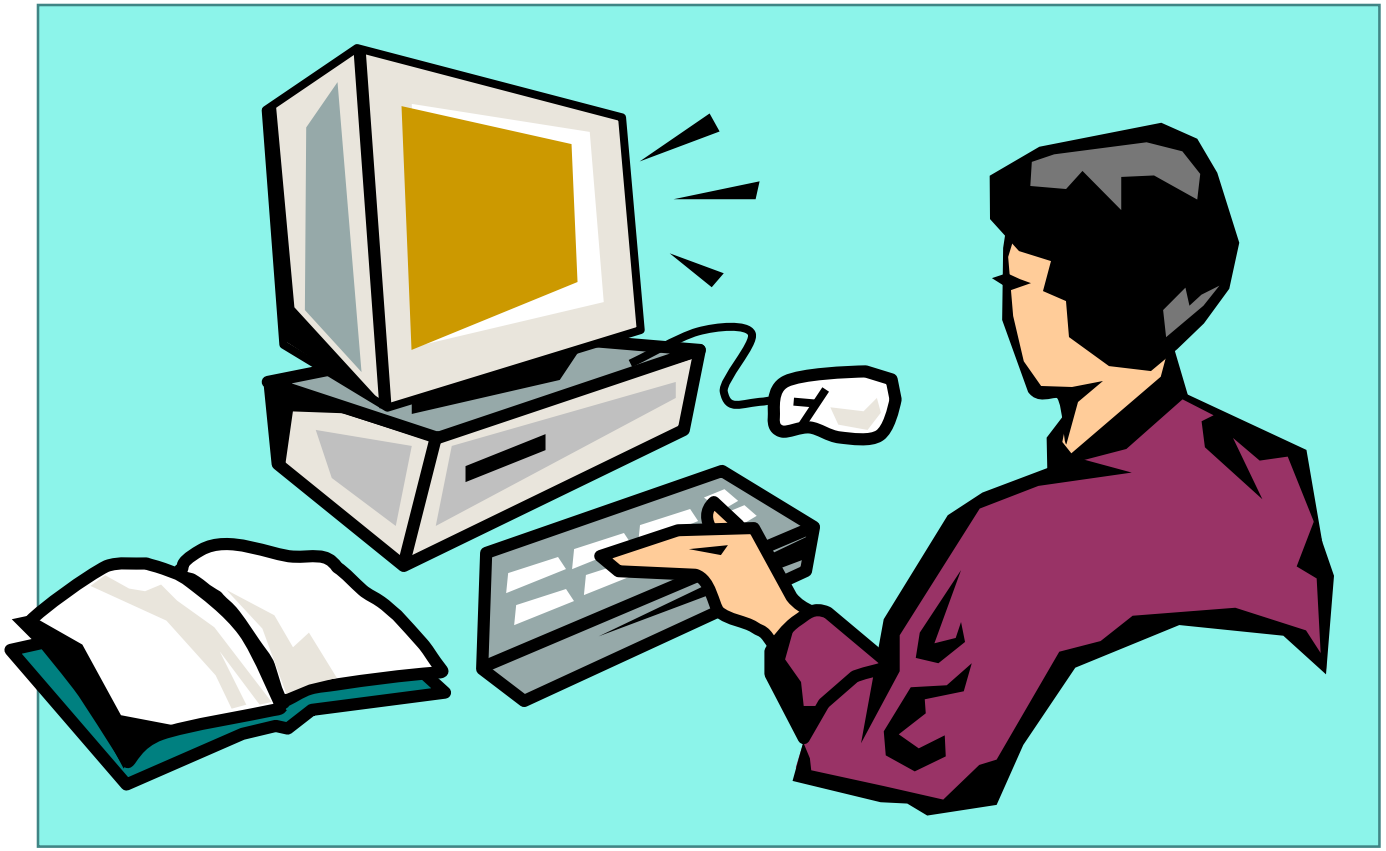
loan

isbn	copy_no	title_no	member_no	out_date	due_date
PK,FK1	PK, FK1	FK,NN	FK, NN	NN	NN
1	1	1	1	03/18/92	03/29/92
4	1	4	1	03/15/92	03/29/92
4	2	4	2	03/17/92	04/01/92
3	1	3	3	03/18/92	04/02/92
1	2	1	1	03/15/92	03/29/92

loanhist

isbn	copy_no	out_date	title_no	member_no	due_date	in_date	fine_assessed	fine_paid	fine_waived	remarks
PK,FK1	PK, FK1	NN	FK,NN	FK, NN						
1	1	10/13/91	1	4	10/27/91	10/26/91	0.00	0.00	0.00	~~~
2	1	07/07/91	2	2	07/21/91	NULL	0.10	0.00	0.10	~~~
2	1	10/13/91	1	4	10/27/91	10/28/91	0.00	0.00	0.00	~~~
1	2	11/06/91	1	3	11/20/91	11/14/91	0.20	0.20	0.00	~~~
1	1	10/30/91		1	11/13/91	11/15/91	0.00	0.00	0.00	

Lab A: Creating Entity-Relationship Diagram



Review

- Determine the Entities (tables) you need
- Determine the attributes (fields) in each entity
- Create the Data Dictionary
- Determine the Relationships by creating the Entity-Relationship Diagram (ERD)
- Transfer the ERD into a relational system (tables, fields, data types, etc.)

References

- Implementing a Microsoft SQL Server 2005 Database Course 2779
- Programming a Microsoft SQL Server 2000 Database. Course Number: 2073A
- Introduction to Database Management. Mark Gillenson. ISBN: 978-0-470-10186-5
- Database Systems: Design, Implementation, & Management. Peter Rob. ISBN: 978-0-619-16033-3
- Relational Database Management System for Windows. Document No. DB64084-0295. Microsoft Press

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