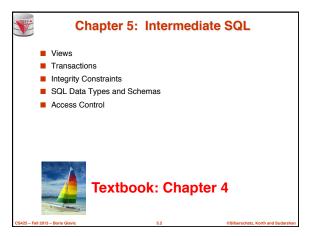
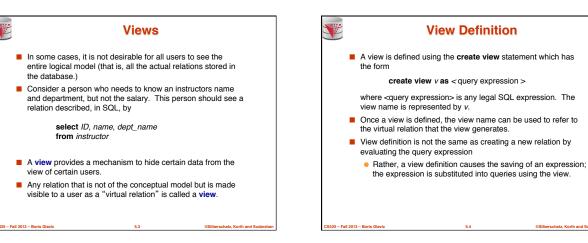
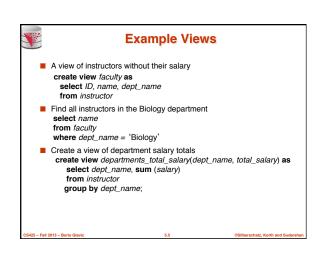
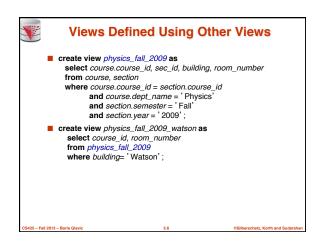


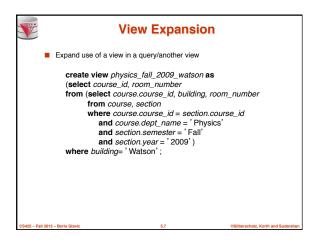
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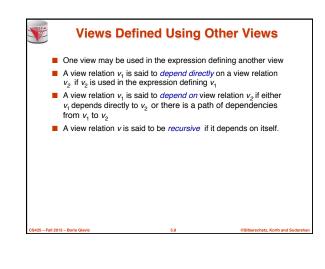


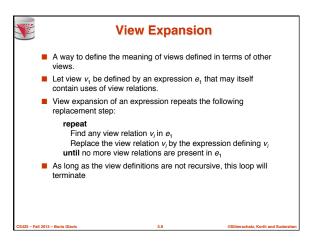


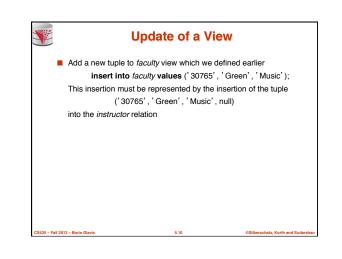


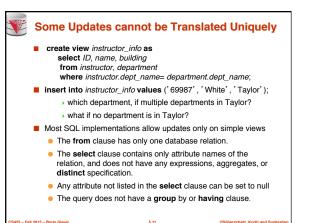


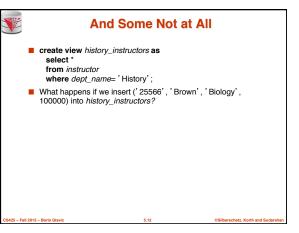


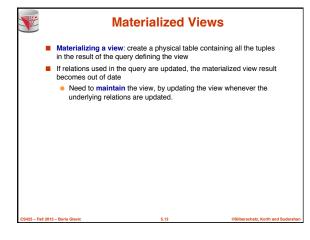


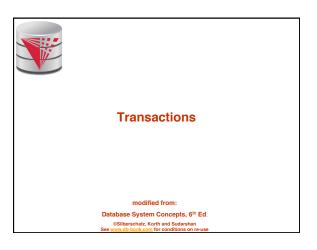


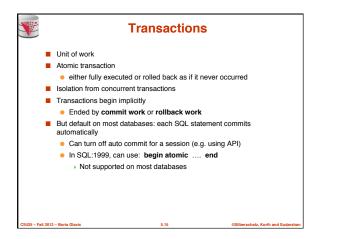


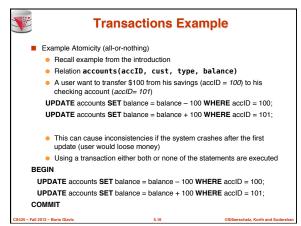


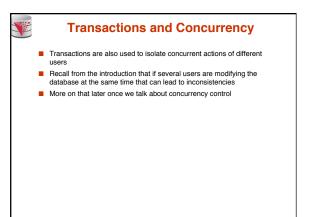


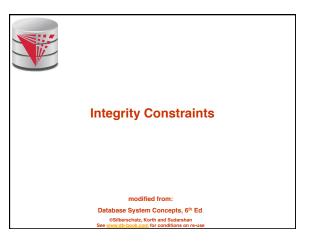


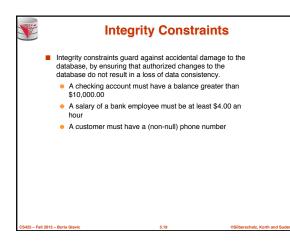


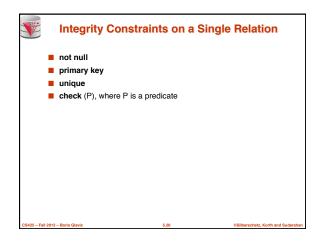


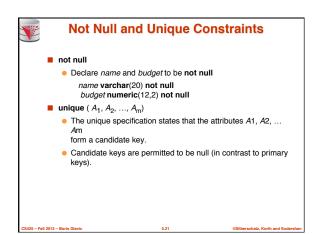


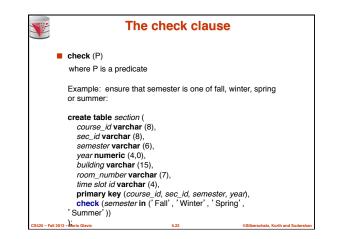


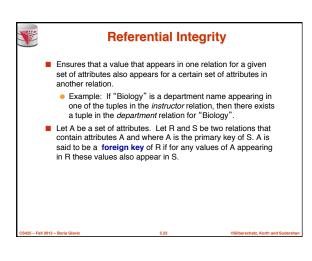


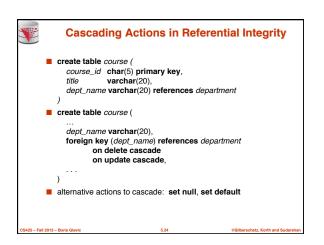




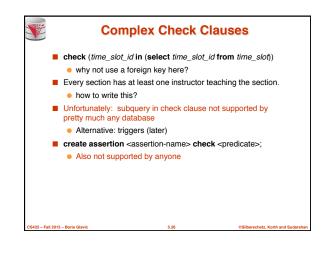


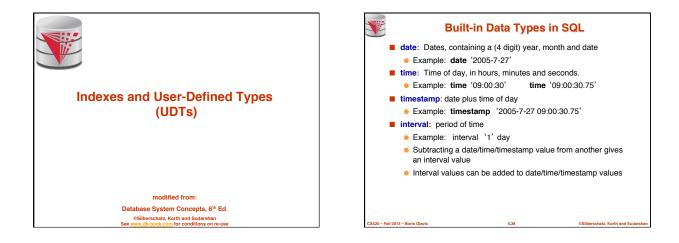


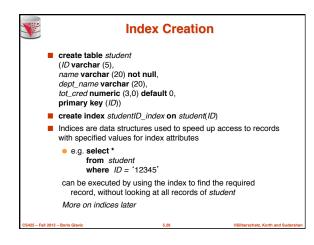


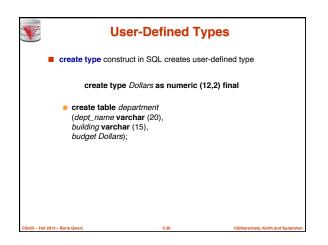


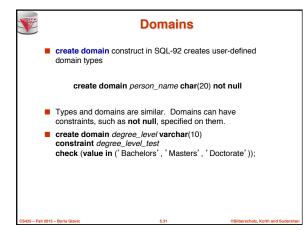
S	Integrit	ty Constra Trans	int Viola sactions		ing
-	E.g.				
		, r(40), ar(10), ır(10),			
	How to insert a	a tuple without	causing con	straint violati	on ?
	insert fathe	er and mother o	f a person b	efore insertir	ng person
	inserting a	ther and mother Il persons (not p declared to be n	possible if fa		
	OR defer of	constraint check	king (next sli	de)	
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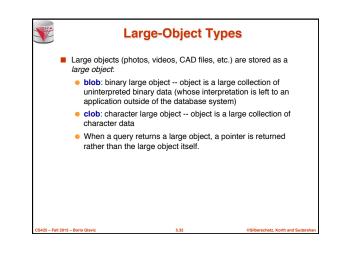


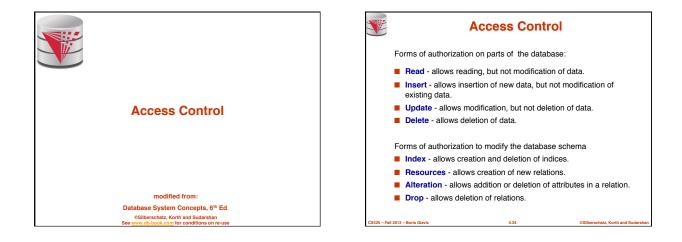




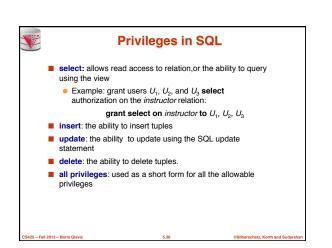


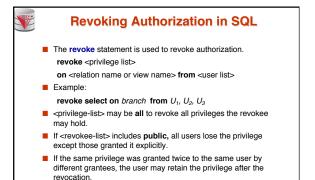






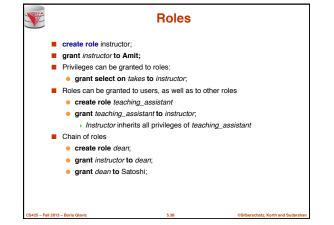


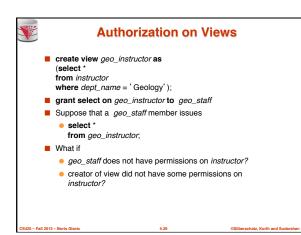


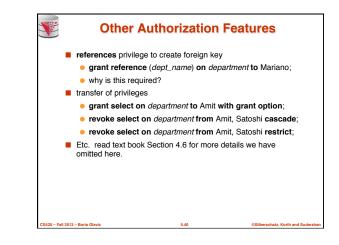


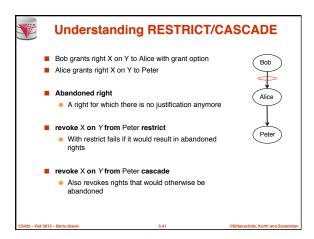
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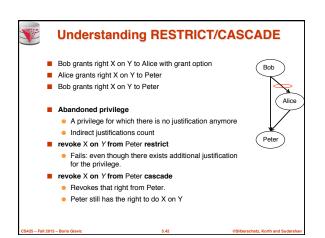
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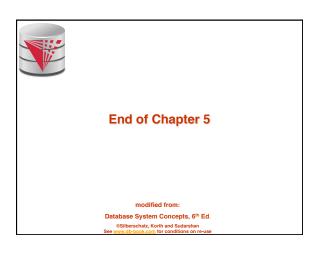


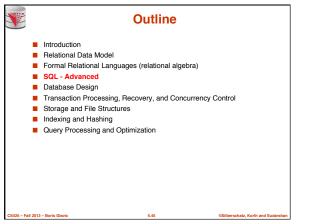












		Figu	ire 4.0	1	
	ID	name	dept_name	tot cred	
	00128	Zhang	Comp. Sci.	102	
	12345	Shankar	Comp. Sci.	32	
	19991	Brandt	History	80	
	23121	Chavez	Finance	110	
	44553	Peltier	Physics	56	
	45678	Levy	Physics	46	
	54321	Williams	Comp. Sci.	54	
	55739	Sanchez	Music	38	
	70557	Snow	Physics	0	
	76543	Brown	Comp. Sci.	58	
	76653	Aoi	Elec. Eng.	60	
	98765	Bourikas	Elec. Eng.	98	
	98988	Tanaka	Biology	120	
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Figure 4.02							
ID	course_id	sec_id	semester	year	grade		
00128	CS-101	1	Fall	2009	Α		
00128	CS-347	1	Fall	2009	A-		
12345	CS-101	1	Fall	2009	С		
12345	CS-190	2	Spring	2009	Α		
12345	CS-315	1	Spring	2010	Α		
12345	CS-347	1	Fall	2009	Α		
19991	HIS-351	1	Spring	2010	В		
23121	FIN-201	1	Spring	2010	C+		
44553	PHY-101	1	Fall	2009	B-		
45678	CS-101	1	Fall	2009	F		
45678	CS-101	1	Spring	2010	B+		
45678	CS-319	1	Spring	2010	В		
54321	CS-101	1	Fall	2009	A-		
54321	CS-190	2	Spring	2009	B+		
55739	MU-199	1	Spring	2010	A-		
76543	CS-101	1	Fall	2009	Α		
76543	CS-319	2	Spring	2010	Α		
76653	EE-181	1	Spring	2009	C		
98765	CS-101	1	Fall	2009	C-		
98765	CS-315	1	Spring	2010	В		
98988	BIO-101	1	Summer	2009	A		
98988	BIO-301	1	Summer	2010	null		
013 – Boris Glavic		5.47					

	Figure 4.03											
ID	name	dept_name	tot_cred	course_id	sec_id	semester	year	grade				
00128	Zhang	Comp. Sci.	102	CS-101	1	Fall	2009	Α				
00128	Zhang	Comp. Sci.	102	CS-347	1	Fall	2009	A-				
12345	Shankar	Comp. Sci.	32	CS-101	1	Fall	2009	C				
12345	Shankar	Comp. Sci.	32	CS-190	2	Spring	2009	A				
12345	Shankar	History	32	CS-315	1	Spring	2010	A				
12345	Shankar	Finance	32	CS-347	1	Fall	2009	A				
19991	Brandt	Music	80	HIS-351	1	Spring	2010	В				
23121	Chavez	Physics	110	FIN-201	1	Spring	2010	C+				
44553	Peltier	Physics	56	PHY-101	1	Fall	2009	B-				
45678	Levy	Physics	46	CS-101	1	Fall	2009	F				
45678	Levy	Physics	46	CS-101	1	Spring	2010	B+				
45678	Levy	Physics	46	CS-319	1	Spring	2010	В				
54321	Williams	Comp. Sci.	54	CS-101	1	Fall	2009	A-				
54321	Williams	Comp. Sci.	54	CS-190	2	Spring	2009	B+				
55739	Sanchez	Music	38	MU-199	1	Spring	2010	A-				
76543	Brown	Comp. Sci.	58	CS-101	1	Fall	2009	A				
76543	Brown	Comp. Sci.	58	CS-319	2	Spring	2010	Α				
76653	Aoi	Elec. Eng.	60	EE-181	1	Spring	2009	C				
98765	Bourikas	Elec. Eng.	98	CS-101	1	Fall	2009	C-				
98765	Bourikas	Elec. Eng.	98	CS-315	1	Spring	2010	В				
98988	Tanaka	Biology	120	BIO-101	1	Summer	2009	A				
98988	Tanaka	Biology	120	BIO-301	1	Summer	2010	null				

		F	-igu	re 4	.04			
ID	name	dept_name	tot_cred	course_id	sec_id	semester	year	grade
00128	Zhang	Comp. Sci.	102	CS-101	1	Fall	2009	A
00128	Zhang	Comp. Sci.	102	CS-347	1	Fall	2009	A-
	Shankar	Comp. Sci.	32	CS-101	1	Fall	2009	С
12345	Shankar	Comp. Sci.	32	CS-190	2	Spring	2009	Α
12345	Shankar	History	32	CS-315	1	Spring	2010	Α
	Shankar	Finance	32	CS-347	1	Fall	2009	Α
	Brandt	Music	80	HIS-351	1	Spring	2010	В
	Chavez	Physics	110	FIN-201	1	Spring	2010	C+
44553	Peltier	Physics	56	PHY-101	1	Fall	2009	B-
45678	Levy	Physics	46	CS-101	1	Fall	2009	F
45678	Levy	Physics	46	CS-101	1	Spring	2010	B+
45678	Levy	Physics	46	CS-319	1	Spring	2010	В
54321	Williams	Comp. Sci.	54	CS-101	1	Fall	2009	A-
54321	Williams	Comp. Sci.	54	CS-190	2	Spring	2009	B+
55739	Sanchez	Music	38	MU-199	1	Spring	2010	A-
70557	Snow	Physics	0	null	null	null	null	null
76543	Brown	Comp. Sci.	58	CS-101	1	Fall	2009	A
	Brown	Comp. Sci.	58	CS-319	2	Spring	2010	Α
76653	Aoi	Elec. Eng.	60	EE-181	1	Spring	2009	C
98765	Bourikas	Elec. Eng.	98	CS-101	1	Fall	2009	C-
98765	Bourikas	Elec. Eng.	98	CS-315	1	Spring	2010	В
98988	Tanaka	Biology	120	BIO-101	1	Summer	2009	Α
98988	Tanaka	Biology	120	BIO-301	1	Summer	2010	null
13 – Boris Glavio				5.49			0Silb	erschatz.

ID	course_id	sec_id	semester	year	grade	name	dept_name	tot_cred
00128	CS-101	1	Fall	2009	Α	Zhang	Comp. Sci.	102
00128	CS-347	1	Fall	2009	A-	Zhang	Comp. Sci.	102
12345	CS-101	1	Fall	2009	С	Shankar	Comp. Sci.	32
12345	CS-190	2	Spring	2009	Α	Shankar	Comp. Sci.	32
12345	CS-315	1	Spring	2010	Α	Shankar	History	32
12345	CS-347	1	Fall	2009	Α	Shankar	Finance	32
19991	HIS-351	1	Spring	2010	В	Brandt	Music	80
23121	FIN-201	1	Spring	2010	C+	Chavez	Physics	110
44553	PHY-101	1	Fall	2009	B-	Peltier	Physics	56
45678	CS-101	1	Fall	2009	F	Levy	Physics	46
45678	CS-101	1	Spring	2010	B+	Levy	Physics	46
45678	CS-319	1	Spring	2010	в	Levy	Physics	46
54321	CS-101	1	Fall	2009	A-	Williams	Comp. Sci.	54
54321	CS-190	2	Spring	2009	B+	Williams	Comp. Sci.	54
55739	MU-199	1	Spring	2010	A-	Sanchez	Music	38
70557	null	null	null	null	null	Snow	Physics	0
76543	CS-101	1	Fall	2009	Α	Brown	Comp. Sci.	58
76543	CS-319	2	Spring	2010	Α	Brown	Comp. Sci.	58
76653	EE-181	1	Spring	2009	С	Aoi	Elec. Eng.	60
98765	CS-101	1	Fall	2009	C-	Bourikas	Elec. Eng.	98
98765	CS-315	1	Spring	2010	В	Bourikas	Elec. Eng.	98
98988	BIO-101	1	Summer	2009	Α	Tanaka	Biology	120
98988	BIO-301	1	Summer	2010	null	Tanaka	Biology	120

