			TT	T	TTT		TIT	-	-	T	T	TT	7	TT	-
100	Wo	rashp	op #	12.	Rela	tional	1/9	ebra					034		
	-10-	13/	26 1 100	-	10	-	1	10 10 1	1	М.	1	B	,		
. 1							Jour 202	2701	Dan OO'	39	tinez	100	mol	14	
	5.75	120	12	53 1		van n	100	cuc							
1 3.		11	1 1												
1. 13 as	ed on	The	rub,	e A	partme	nd si	hows a	o Po	1/94	U					
Apartmen	NID	Num	ber B	lock	ow	ner		1	Are	al	Roo	m.1	+		
	1 18	10				4 0	6								
2	1280	10		1	Chai	Smi	th		711 241	5	S				
3	++	10		3	Weil	Peu	7/	+	6	0	3	11 31			
4	4.4	30		2		Van 1	Halen	++	1	5	3	-	+	-	
5	11	30		3		lee		+		0	2		+	+	
6	1 1 1 8	30		1	Sami	ny H	agar			0	3		H		
7	12 B	20		2	Micha	el Ar	thony		4	0	2				
8	-	3 0		3	Gary	Che	rane			5	2				
10	+++		9	1 2	Wolf	gang V	an Hel	en		5	3		\perp		
		0 (U	va/e	ne 1	ger tine	Wi	8		3		+ 1		
) show	the	numb	0	Pth	A (100	t mai	+1 100	14.		46	5	0 1	×	3	
1	1			1		1.0	33 00	1011	TOTE	7116	anc	NO A	1 24	•	
102,	103,	306	, 30	8, 4	09, 3	10			143	177	5330		H	7-	
			0		1	12 4			No		L.O.			5	
show;	the no	mber	and	own	er of	the c	apartn	ents	w	idni	nore	than	2	K00	M
4110 1	20) /	nan	4 r	wm J	2	2 2		13/0		0 52 9	1		H		
102-	Neil	Pear	1 10	23-	4/ex V	un Ha	len	306	- 81	umm	v Ha	0.00	H		
409-1	rolfg	una Vi	an He	len!	310	-Vale	rie !	3ert	ne	11,	1 mg	your t	H	5	
1100	0			1		4101			900	4	1180			1	
		number	100									alh	mor	re o	7
Show	the r	10000	1,00	viler	and A	rea c	Ptho	e up	urs	men	ts a	er a			
	the r	nd le	ess t	han	and A	rea c	Ptho	e up	urs	men	ts a	100	1		
Show 40 Ar	ea a	nd le	ess f.	han	70 AI	rea	1 - 1/4/	ku k	urt	men	ts a				
) show 40 Ar	ea a	nd le	nish	han	70 AI	4 5	1 - 1/4/	e up	urt	men	ts a	414			
) show 40 Ar 101	ea a Chi	nd le ud In Il Pe	nish earl	han	70 AI	4 5 6 0	1 - 1/4/	ku k	art	men	ts a	200			
) show 40 Ar 1 0 1 1 0 2 3 0 5	Chi Nei Dan	nd le	nith earl	th	70 AI	4 5 6 0	1 - 1/4/	ku k	urt	men	ts a				
) show 40 Ar 101	Chi Nei Dan Gun	nd le ud In il Pe vid Le ry Ch	nith earl ec Ro	th	70 A1	4 5	1 - 1/4/	ku k	urt	men	ts a				
1 0 1 1 0 2 3 0 5 3 0 8 4 0 9	Chi Nei Dan Gun	nd le	nith carl ce Rome or evance	th in Ite	ten.	4 5 6 0 5 0 5 5 6 5	50.00			see see		¥			
Show 40 Ar 1 0 1 1 0 2 3 0 5 3 0 8 4 0 9	Chi Nei Dan Gun Wol	nd le ud In il Pe vid Le ry Ch lfgun	nith earl ee Rone gerone	the the	ten able	4 5 6 0 5 5 6 5 Apura	tment	wh	ere	the	Qu	ner	Con	tuli	23
) show 40 Ar 1 0 1 1 0 2 3 0 5 3 0 8	Chi Nei Dan Gun Wol	nd le ud In il Pe vid Le ry Ch lfgun	nith earl ee Rone gerone	the the	ten able	4 5 6 0 5 5 6 5 Apura	tment	wh	ere	the	Qu	ner	Can	tull	23
101 102 305 308 409 Show	ea a Chi Ne Dan Gun Wol all Torr	nd le ud In il Pe vid Le ry Ch lfgun rous Vun	nith earl ec Ron g erone of t	the ten	ten able	4 5 6 0 5 5 6 5 Apura	tment	wh	ere 'en A	the	Qu	ner ts	Con	tall	23
Show 40 Ar 1 0 1 1 0 2 3 0 5 3 0 8 4 0 9 Show the w	ea a Chi Ne Dan Gun Wol all Torr	nd le ud In il Pe vid Le ry Ch l Fgun raus Vun	nith earl ec Rangerana of t Italians	the topp, a	len able	4 5 6 0 5 5 6 5 Apara	tment Vai	wh.	ere len A	the	Qw tmen Roo	ner ts	Con	tall	23
101 102 305 308 409 Show	ea a Chi Ne Dan Gun Wol all Torr	nd le ud In il Pe vid Le ry Ch l Fgun raus Vun	nith earl ec Ron g erone of t	the ten	len able and a	4 5 6 0 5 5 6 5 Apura Called	tment	wh.	ere len A	the	Qu	ner ts	Cen	tuji	23

						L		1	-	-	1)		-		,	-			6.1												
0)	U	Ulr	9	ne	X	/	to	b	le	ca	1/0	0	1	Ub	110	Je	rno	co	,	Jh	9W	1	he	2	No	m	ber	- (2/		
	71	be	a	DA	W7	m	en	ナン		WI	dn	m	one	2	th	an	6	0	A	re	4	w	11	h	al	1	the	0			
	Po	b/1	ed	er	ne	es	10	av	all	a.	Ne	13			-	-		-	_	-	_			_							
_	_	_	_	1.			-	1	-	1	10	1	7 1	10		1		-	,					_		_					
4	80	w	100	11	2_	N	ar	ne	+	+	\vdash	Н	\neg	146	IM	De	W	-	de	TN	Ce	12	/_	-	Na	m	e				
-	_	_	,	_	-	-		1.	2).	1	-	H	-	1	0	2	\vdash	-	-		1	_	_			L.					
-	-	-	1	_	H	H			er		1	-		1	0	3	100	20	131	1	1						er				
4	_	_	2	1.7		01		1	And	10	1			1		-			_		2	21	-	_	61	20	dr)	610	ty		
-	_	-	3	120		1	6	as	F	1	+	\vdash	-	3	0		Cr.y	775	_	A	3	100				us					
-	-	-	-	-	0	-	H	18	1	-	+	-	-	-	0	-		3 =	_	-	1	-	-		1a			,			
-	-	-	-	-	5	-	-	10	12	-	+	+	-		0	6	37/3		-	-	3	-	-				nci	ty			
-	-	-	-	-	2	-	-	1	7	+	+	-	60		0					H	1	H	1		as		H	-	1		
-	-	-	-	-	7	-	-	10	15	+	+	-			0			-	1	-	2	-	-		at			,	- 1		
-	-	-			12	-	-	1	12	+	-	+	1		0		30	-		H	3	H	1				100	11	5		-
-	-	-	-		7 60	-	1	10	15	1	1	+	17.	-	1		1000		5		1	\vdash	0		us			-	341	H	-
					5		1	1	-	+	1.	1	100	3		0	-				2		1				-	1	I	H	
					3		1	13	15	1	1	1	t.	-	1	on manufact and	915				3	H	9.	E	as	71	1 a	y		H	
					3		T	1 8	18	1	1		140	10.10	1				7		0		fa		100		Н		Ť		
2	1	Bas	00		on	1	h,	1	An	11.		ow	na	-	1	ha		/	1	C	11	200	1	Ť	3		H				-
-		-	0		,,,	1	1	1	u,	110		u	1/0		0	740	VS	и	XV.	1	///	iu.	_	Н		-	H				-
2	VI	er	1	7	8	Na	m	0	L	200	16	10	1	12	19		C	h.l	dr	00	G,	pe	41	100		3					1
_			- /			Г	T		T	T	T				F	0			UI	Cir			00								
	1				0	ha	1	(m	th		T					0		- (2		8	1		C	8	3	0		5		
	2								W		T	T			4	5			1			0	-			-					
(y	3	3	Sil	33							n	0 557	-	10		0	1		3	1		2				.53	11.50				
	4				E	ddi	e	Va	1	Her	en				5	8			2		26	1	1	1	00		1		10		
	5				0	un	1	Le	c	Ro	th				5	5		,	1			0									
	6			76.	8	am	m	V	Ha	ga	0	1	. 0	100	6	5	W	16.0	2	-	.0	1		0.5	0		0		83	7	
	7	L			M	ic	ha	el	A	n H	ion	A S		1.1		0	0	1 8	3		1.	2	1			J.A			P	11	
	8				6	41	y	C	her	on	0				4	0			1			0									
Ì	9		1.5	1	W	01	A90	ung	V	un	He	ler.	1	20	3	0	1	No. (0			0	1	8	185						
_	10	1	L	_	Va	1/	en	c	1	er	tin	111			6	5	111	0	2		10	1	1,3			6	y , 6.	1	- 5	1	
		_	_		_	L	1			1																					
a,	10	ha	1	th	e	N	am	e	a	F	t	he	00	me	N.	a	red	4	n	101	re	1	ha	n	50	2	492	1	Q		
_	_	_			-	-	1	-	1	1					1	9						1/2	414	1			1		D.		
_	M	ar	ne	-	-	11	1	-	1	1	-	1			0	3						A	44		10.4	1		5		1	
-	1	le	X	va	7	te	le	7	+	1	1	-			3,	3					1		111					8		5	
-	1	00	e	V	an	12	01	en	-	+	+	-	_	-	18	13		115	15		1		-	11	M	1	1	1	13	1	_
04	1	ar	10	1.6	ee	-	1	90	6	+	1	-	-	-	-				_						L	L	1				_
7 1	1	11,	h	1	14	ag	ar	-	-	+	1	-	16	-	15	B	1	lif.	27	1	11	1		4	03		10		128		
-	1/	1	na	1	1	711	11	on	111		1	1	V		1	1,10		25	13	1	10	100	2	112		17	100	3	1		
	V	11	er	e	1	10	111	140	111	+	+	+	-	+	-	-	-		_	-	_	-	-	-	-	-			_		-
	T	1	+	+	8	+	+	1	+	+	+	-	18	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	H	-
	T	1	T	T	1	1	1	6	1	+	10	100	1/3	1	10/	1	M	-	1	-	-	1	9	5	-	-	-	0	-	-	_
		_		-0	-6-		-4-	-	_			133	10	1117		190	00		1	1	11	1 1		. 0.		1	1	1 19			

														1	00_	M	
			T	T	TT		-	T		7	-	T	Ŧ		F	H	
b) Show to Children	he Name	ann	1	10-	06	2 44		·				m	4.0	. 1	4.		1
Children	and	le 1.1	1	har	3	(1	00	w	ers	w	irn	1//	ore	-	nu	7	-
13 113 1				2 04.77	TŤ		110	ren					t	+			+
Name		Ag	9								\neg	Ť	t			П	Ť
Chick		0							H			T	Ť	t			1
Chad Smit	-	5	0										T			П	
Eddle Van	Helen		0														
Summy W. Valence De	agar	6:		-		11		1						L			
valene we	rinein	6.	5	-		+	-	-					L				
I how the	Name	101		. /	C1 1	/	-	0	,	0	11	+					
show the	o Un	Tye	an	0	Chil	dren	9	1	ne	OF	the	0	un	ers	w	11%	6
more thu	70 /	792	an	d	1000	1 1	an	0	0	A91	:	+	+	-		-	
Name	2444-10	100	1	10	1/	(0.00			-	-	+	+	+	į.		-	
	13 2 2	1190	10	101	hildr	en	15		14 E	9-10	+	9	1	-	H	H	-
Chad Smid	h	50)		2	170	4	8-	277	1	+	+	-	+			4
Neil Pear		45	-		1			Н	-	11	-	+	+	10.		-1	
Eddle Van		58			2		1				+	+	H	Н		-	+
Dand Lee	Roth	55	1	25	1	14634	2		- 4	++1	-	-	-	P	H	-	
		1	10	1				1 1	0.04								
Show all substring in	the I	ame	117	an	1 0	alle	0	1	Qu	nes	re	W	a	ar	(ar	a	
Show all	the I	ame	117	able an	1 0	vne. alle	0	1	Qu	nes	re	W	a	ar	(ar	a	
Show all substring in	me II	ame	Ag	an.	1 0	ildre	o en	/1	Pet	nes	re	W	a	ar	(ar	a	
Show all substring in wher ID Na	me Pearl	ame	Ag	and se	1 0	alle Nore	o en	/1	Pet	nes	re	W	a	ar	(a)	a	
Show all substring in when ID Na Z Neith Sum.	me Pearl my Hagas	ame	A9 4 6	and se	1 0	alle Nore 1 2	o en	1	Pets O	nes	ne	W	a	ar	or	an	
Show all substring in when ID Na Z Neith Sum.	me Pearl	ame	A9 4 6	and se	1 0	alle Nore	o en	1	Pet	nes	ne	W					
Show all substring in when ID Na Z Neith Sum.	me Pearl my Hagas	ame	A9 4 6	and se	1 0	alle Nore 1 2	o en	1	Pets O	nes	re	W			r ar		
Show all substring in when ID Na Neith Sum. S Gary	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and selections	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1							
Show all substring in whorld Na 2 New Same Show the	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and selections	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1							
Show all substring in when ID Na Neith Sum. S Gary	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and selections	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1		1	PE		a	nd	
Show all substring in whost ID Na 2 Neil 6 Sum. S Gary Show the than 2 Ch	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1		1			a		
Show all substring in whorld Na 2 New Same Show the	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1		1	PE		a	nd	
Show all substring in when ID Na New Sum. Show the than 2 Ch.	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1		1	PE		a	nd	
Show all substring in whost ID Na 2 Neil 6 Sum. S Gary Show the than 2 Ch	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1		1	PE		a	and	
Show all substring in when ID Na New Sum. Show the than 2 Ch.	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1		1	PE		a	nd	
Show all substring in when ID Na New Sum. Show the than 2 Ch.	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1		1	PE		a	and	
Show all substring in when ID Na New Sum. Show the than 2 Ch.	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1		1	PC	e de	a	nd	
Show all substring in when ID Na New Sum. Show the than 2 Ch.	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and selections	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1		1	PE	e de	a	and	
Show all substring in when ID Na New Sum. Show the than 2 Ch.	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and selections	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1		1	PC	e de	a	nd	
Show all substring in when ID Na New Sum. Show the than 2 Ch.	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and selections	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1		1	PC	e de	a	nd	
Show all substring in when ID Na New Sum. Show the than 2 Ch.	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and selections	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1		1	PC	e de	a	nd	
Show all substring in when ID Na New Sum. Show the than 2 Ch.	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and selections	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1		1	PC	e de	a	nd	
Show all substring in when ID Na New Sum. Show the than 2 Ch.	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and selections	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1		1	PC	e de	a	nd	
Show all substring in when ID Na New Sum. Show the than 2 Ch.	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and selections	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1		1	PC	e de	a	nd	
Show all substring in whorld Na New Sum. Show the than 2 Ch.	me Pearl my Hagas Cheron	l'am e	A9 4 6 4	and selections	ch Ch	alle Idre 1 2	d en	\(\alpha\)	on Person	nes 1		1	PC	e de	a	nd	

3. Based	on	the	table	Reservations	Show	as fallows	
----------	----	-----	-------	--------------	------	------------	--

ReservationsID	ApartmentNumber	Owner	Date	CommonSpace
1	101	Chad Smith	2024-01-01	Soccer Field
2	102	Neil Pearl	2024-01-02	Pool
3	101	Chad Smith	2024-01-02	Gym
4	103	Alex Van Halen	2024-01-03	Pool
5	102	Neil Pearl	2024-01-02	Soccer Field
6	103	Alex Van Halen	2024-01-04	Gym
7	101	Chad Smith	2024-01-05	Pool
8	102	Neil Pearl	2024-01-06	Gym
9	103	Alex Van Halen	2024-01-07	Soccer Field
10	101	Chad Smith	2024-01-08	Pool

a) Show the	Agar	Im on	+10	mb	en	0	wn	er	a	nd	Com	mai	1)	Pace	OF	the
	Reservatio	n w	th	Da	te	2	02	0-	0	1-	01	a	20	6	alle	6	
	New Year 12								5			0					

_	Apartment Nomber	owner	CommonSpace	N	3				İ
_	00010	Null	1 -12			188	-	3 . 6	1
-	NULL	Nou	Nell	-	1	-		++	+

b) show the owner of the Reserva trons after 2024-01-02 date, and the common space is pool or the Apartment Number is 104

0	vn	er				
Al	ex	V	ar	1	te	len
C	ha	1	5	mi	th	
	ha					-

	10 MM
	DD MM
c) Show the	
es ander one	Reservations ID and Commonspace of the Reserva
Reservations	Company
1	Common Space
1	Soccer Field
2	Pool
3	Gym
5	Pool
6	Soccer Field
7	Gym Phod
8	Pool Gym
9	Soucer Field
20	Pool
4. Based on the	e tables showed above create an ER Diagram
to show the	relationships between the tubles.
Mo di di	
Apartment	Owner
+ Apaitment 10: mg	t Owner 10 px : /n =
+ Number: Ind + Block: In+	
+ Owner : owner 10	t Age: Int
+ Area: int	EX + Children = 107 + Pets: lot
+ Room int	
+ Room ; Int	
+ Rooms int	
+ Rooms: Int	
+ Rooms: Int	
+ Rooms int	A part ment - Publiceivices If service ID: FK: Int The part ment ID- FK: Int
+ Rooms: Int	A part ment - Publicservices Its errice ID: FK: Int The art ment ID - FK: Int
+ Rooms: Int	A part ment - Publicservices Its errice ID: FK: Int The art ment ID - FK: Int
+ Rooms: Int	Reservation District
+ Rooms: Int	Apartment - Publicervices If service 10: FK: Int Then I ment 10- FK: Int Reservation
+ Rooms: Int	Reservation District