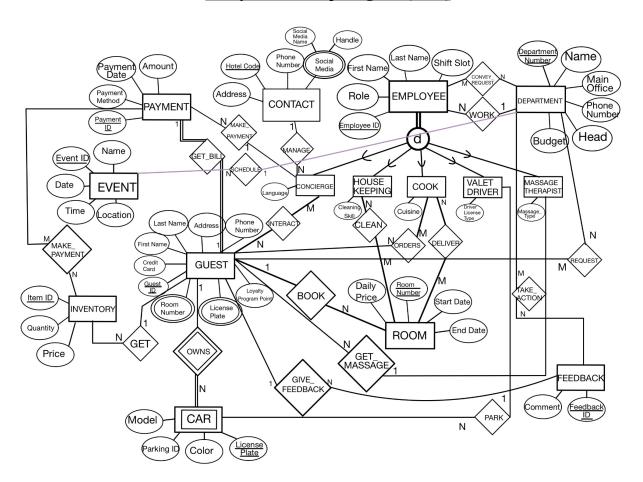
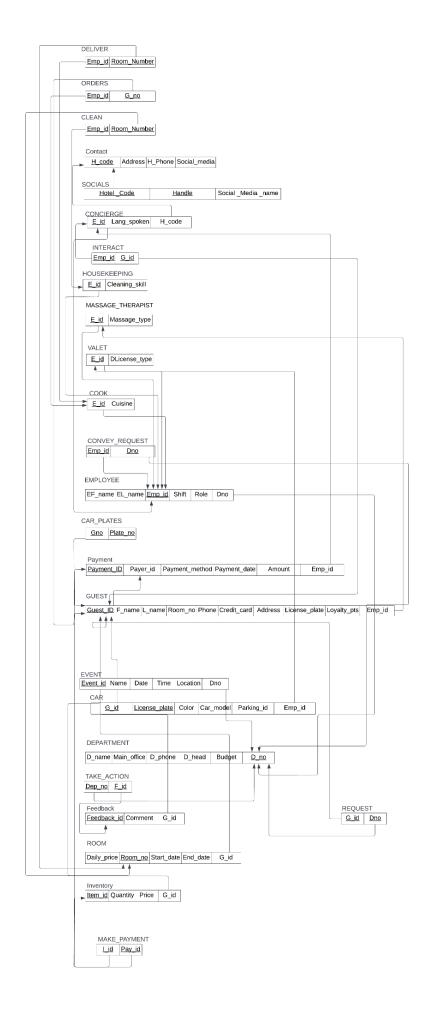
CS 4347.004 Database Systems Project Part 1 – Team 7

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Entity Relationship Diagram (ERD)



Supporting Schema Diagram



Data Dictionary for the Schema

Table	Table Description	Primary Key	Super Key	Attr	Attributes			Foreign Key
Contact	The hotel's contact information, including the address, phone number, and social media	H_code	(H_code, Address, H_phone, Social_Media)	H_ Ac	attribute I_code address	Data Type VARCHAR VARCHAR	Domain any string any string requiring positive integers and alphabet	N/A
					I_phone	BIGINT	The set of ten-digit phone numbers valid in the United States.	

Table	Table Description	Primary Key	Super Key	Attributes			Foreign Key
	All the departments in the hotel.	D_no	(D_name, Main_office,		1	1	N/A
Department	notei.		D_phone, D_head, Budget, D_no)	Attribute	Data Type	Domain	
			Baaget, B_ito)	D_name	TEXT	any alphabetical string	
				Main_office	TEXT	any alphabetical string	
				D_phone	BIGINT	The set of ten-digit phone numbers valid in the United States.	
				D_head	TEXT	any alphabetical string	
				Budget	MEDIUMIN T	any integer from 0 to 16777215	
				D_no	VARCHAR	A set of integers ranging from 1 to 99	
						<u> </u>	

	Table	Table Description	Primary Key	Super Key	Attributes			Foreign Key
		The room that the guest books.	Room_no	(Daily_price,				G_id
	Room			Room_no, start_date, end_date, G_id)	Attribute	Data Type	Domain	
					Daily_price	DOUBLE	any integer with decimal points	
					Room_no	SMALLINT	any integer from 1 to 65535	
					start_date	DATE	any date from 1000-01-01 to 9999-12-31	
					end_date	DATE	any date from 1000-01-01 to 9999-12-31	
					g_id	VARCHAR(2 0)	The set of characters that make up	
L						•	•	

												lic	driver's ense mber			
Table	<u> </u>	Table	e Description	Prin	mary Key		uper Key		Attri	hutae					Fore	ign Key
Table	-	+		_		+			Auri	outes					+	<u> </u>
			Feedbacks about their rience in hotel after their		dback_ID	C	Feedback_ID, omment)		Att	ribute	Data	Туре	Doma	iin	G_id	
	Feedback								Fee	dback_ID	СНА	R(12)	any n	umber		
									Co	nment	VAR	CHAR(5	any			
											000)		alpha string	betical		
	Table		Table Description		Primary Key		Super I	ev		Attribute	•6					Foreign Key
			The cars that the guest	s have	G_id		(G_id, N									Emp_id, G_id
	Car		parked in the hotel	<i></i>	License_Plate		Parking Color,	_ID,		Attribut	te	Data Typ	e	Domain		2.mp_ta, 0_ta
							License	_Plate)	'	G_id		VARCHA	AR(2	The set of		
												0)		characters that make a driver's		
														lisence number		
										Model		VARCHA	AR(3	any alphabetic	al al	
												0)		string		
										Parking	_ID	CHAR(1	2)	any numbe	er	
										Color		VARCHA 5)	AR(1	any alphabetic	al	
										<u> </u>				string		
										License	_Plate	VARCHA 0)	AR(1	any alphabetic string	al	
													I			
1					1		Ι		_							
	Table		Table Description		Primary Key		Super I			Attribute	es .					Foreign Key
			The events that the gue reserved in advance.It the Hotel	ests held in	Event_ID		(Event_ Date, Ti Location	ID, Na me, 1)	me,	Attribut	te	Data Typ	ie	Domain		D_no
	Event									Name		VARCHA	AR(1	any		
												5)		alphabetic string	al	
										Event_	_ID	CHAR(1	2)	any numbe	er	
										Date		DATE		any date fr 1000-01-0	om	
														9999-12-3	1	
										Time		DATETI	ME	anytime from 00:00:0 23:59:59	00 to	
										Locatio	n	VARCH	AR(2	any	\dashv	
										Boomio		0)	(2	alphabetic string	al	
													!			
į	Table		Table Description		Primary Key		Super I	Cev.		Attribute	•6					Foreign Key
	TADIC		all the hotel service wo	orkere	+					Auribute	.5					
	Employee		an me notei service wo	A KUIS	Employee ID		(Employ First_Na Last_Na	ıme,		Attribut	te	Data Typ	e	Domain	\Box	Department Number
							Shift Departn Number			Employ	ree_ID	INT(9999	9999	The set of		
								,				99)		digit social security numbers		

				EF_Name	VARCHAR(1 5)	any alphabetical string	
				EL_Name	VARCHAR(1 5)	any alphabetical string	
				Role	VARCHAR(1 0)	any alphabetical string	
				Shift	DATETIME(0)	Any date with time from 00:00:00 to 23:59:59	
				Dno	VARCHAR	A set of integers ranging from 1 to 99	
Table	Table Description	Primary Key	Super Key	Attributes			Foreign Key
	Specialization of EMPLOYEE in charge of hotel management	Employee ID	(Employee ID, Hotel_code)	İ			Hotel_code
Concierge	and guidance		riotei_code)	Attribute	Data Type	Domain	
				Employee ID	INT(9999999 99)	The set of 9 digit social security numbers	
				Lang_spoken	VARCHAR(1 1)	any alphabetical string	
				Hotel_Code	CHAR(15)	Any String	
Table	Table Description	Primary Key	Super Key	Attributes			Foreign Key
Table	Specialization of EMPLOYEE	Primary Key Employee ID	Super Key (Employee ID)	Attributes			Foreign Key Employee ID
Table Housekeeping				Attributes Attribute	Data Type	Domain	+
	Specialization of EMPLOYEE in charge of cleaning the hotel				Data Type INT(9999999 99)	Domain The set of 9 digit social security numbers	+
	Specialization of EMPLOYEE in charge of cleaning the hotel			Attribute	INT(9999999	The set of 9 digit social	+
	Specialization of EMPLOYEE in charge of cleaning the hotel			Attribute Employee ID Cleaning_skil	INT(9999999 99) VARCHAR(3	The set of 9 digit social security numbers any alphabetical	+
	Specialization of EMPLOYEE in charge of cleaning the hotel			Attribute Employee ID Cleaning_skil	INT(9999999 99) VARCHAR(3	The set of 9 digit social security numbers any alphabetical	+
Housekeeping	Specialization of EMPLOYEE in charge of cleaning the hotel room Table Description Specialization of EMPLOYEE in charge of massage services	Employee ID	(Employee ID)	Attribute Employee ID Cleaning_skil 1 Attributes	INT(9999999 99) VARCHAR(3 0)	The set of 9 digit social security numbers any alphabetical string	Employee ID
Housekeeping	Specialization of EMPLOYEE in charge of cleaning the hotel room Table Description Specialization of EMPLOYEE	Employee ID Primary Key	(Employee ID) Super Key	Attribute Employee ID Cleaning_skil Attributes Attributes	INT(9999999 99) VARCHAR(3 0) Data Type	The set of 9 digit social security numbers any alphabetical string	Employee ID Foreign Key
Housekeeping	Specialization of EMPLOYEE in charge of cleaning the hotel room Table Description Specialization of EMPLOYEE in charge of massage services	Employee ID Primary Key	(Employee ID) Super Key	Attribute Employee ID Cleaning_skil 1 Attributes	INT(9999999 99) VARCHAR(3 0)	The set of 9 digit social security numbers any alphabetical string	Employee ID Foreign Key
Housekeeping	Specialization of EMPLOYEE in charge of cleaning the hotel room Table Description Specialization of EMPLOYEE in charge of massage services	Employee ID Primary Key	(Employee ID) Super Key	Attribute Employee ID Cleaning_skil Attributes Attributes	INT(9999999 99) VARCHAR(3 0) Data Type INT(9999999	The set of 9 digit social security numbers any alphabetical string Domain The set of 9 digit social security	Employee ID Foreign Key
Housekeeping	Specialization of EMPLOYEE in charge of cleaning the hotel room Table Description Specialization of EMPLOYEE in charge of massage services	Employee ID Primary Key	(Employee ID) Super Key	Attribute Employee ID Cleaning_skil Attributes Attribute Employee ID	INT(9999999 99) VARCHAR(3 0) Data Type INT(9999999 99) VARCHAR(3	The set of 9 digit social security numbers any alphabetical string Domain The set of 9 digit social security numbers any alphabetical security numbers	Employee ID Foreign Key
Housekeeping	Specialization of EMPLOYEE in charge of cleaning the hotel room Table Description Specialization of EMPLOYEE in charge of massage services	Employee ID Primary Key	(Employee ID) Super Key	Attribute Employee ID Cleaning_skil Attributes Attribute Employee ID	INT(9999999 99) VARCHAR(3 0) Data Type INT(9999999 99) VARCHAR(3	The set of 9 digit social security numbers any alphabetical string Domain The set of 9 digit social security numbers any alphabetical security numbers	Employee ID Foreign Key
Table Massage Therapist Table	Specialization of EMPLOYEE in charge of cleaning the hotel room Table Description Specialization of EMPLOYEE in charge of massage services for guests Table Description Specialization of EMPLOYEE in charge of valet parking	Primary Key Employee ID	(Employee ID) Super Key (Employee ID)	Attribute Employee ID Cleaning_skil Attributes Attribute Employee ID Massage_type Attributes	INT(9999999 99) VARCHAR(3 0) Data Type INT(9999999 99) VARCHAR(3 0)	The set of 9 digit social security numbers any alphabetical string Domain The set of 9 digit social security numbers any alphabetical string	Foreign Key Employee ID
Housekeeping Table Massage Therapist	Specialization of EMPLOYEE in charge of cleaning the hotel room Table Description Specialization of EMPLOYEE in charge of massage services for guests Table Description Specialization of EMPLOYEE	Primary Key Employee ID	(Employee ID) Super Key (Employee ID)	Attribute Employee ID Cleaning_skil Attributes Attribute Employee ID Massage_type	INT(9999999 99) VARCHAR(3 0) Data Type INT(9999999 99) VARCHAR(3	The set of 9 digit social security numbers any alphabetical string Domain The set of 9 digit social security numbers any alphabetical security numbers	Foreign Key Employee ID Foreign Key Foreign Key

				DLicense_typ	VARCHAR(3	security numbers any Strin			
				e e	0)				
Table	Table Description	Primary Key	Super Key	Attributes				Foreign	Key
	Specialization of EMPLOYEE responsible for cooking and	Employee ID	(Employee ID)					Employe	e ID
Cook	room service food delivery			Attribute Employee ID	Data Type INT(9999999	Domain The set of			
				Employee ID	99)	digit soci security numbers	ial		
				Cuisine	VARCHAR(3 0)	any alphabeti string	ical		
Table	Table Description	Primary Key	Super Key	Attributes					Foreign Key
Payment	The payments that are involved during the guests stay at a hotel	Payment_ID	(Payment_ID, Payer_id, Payment_method,	Attribute	Data Type	Г	Oomain		N/A
			Payment_date, Amount, Emp_id)	Payment_ID	CHAR(12)	a	ny number	r	
				Payer_id	VARCHAR	c n d	The set of haracters to hake up a driver's lice number		
				Payment_method	d ENUM(Cast Credit, Debi	t) p	The list of possible ralues(Caslebit, credit	o, t)	
				Payment_date	DATE	1	ny date fro 000-01-01 999-12-31	to	
				Amount	DECIMAL(19,4) A	Any non-ne lecimal val	egative ue	
				Emp_id	INT(999999	S	The set of 9 ocial secur	digit	
				<u> </u>					
Table	Table Description	Primary Key	Super Key	Attributes				Foreign	Key
Inventory	The goods that the hotel provides to the guests	Item_id	(Item_id, Quantity, Price, G_id)	Data Type	Data Type	Domain			
				Item_id	CHAR(12)	any Strin	ng	N/A	
				Quantity	SMALLINT	any integ from 1 to 65535	ger O		
				Price	DECIMAL(1 9,4)	Any non-nega decimal	ative value		
				G_id	VARCHAR(2 0)	The set of character that mak a driver's license number	rs e up		
				<u> </u>					
Table	Table Description	Primary Key	Super Key	Attributes				Foreign	Key
Guest	The individual who is visiting	Guest_ID	(Guest_ID,					Emp_id	

the hotel to use the amenities provided.	F_name, L_name, Room_no, Phone, Credit_card,	Attribute	Data Type	Domain	
	Address, License Plate, Loyalty_pts, Emp_id)	Guest_ID	VARCHAR(2 0)	The set of characters that make up a driver's license number	
		F_name	VARCHAR	any alphabetical string	
		L_name	VARCHAR	any alphabetical string	
		Room_no	SMALLINT	any integer from 1 to 200	
		Phone	BIGINT	The set of ten-digit phone numbers valid in the United States.	
		Credit_card	TINYINT(16)	Any 16-digit integer	
		Address	VARCHAR(2 00)	any alphabetical string	
		Lisence Plate	VARCHAR(1 0)	any alphabetical string	
		Loyalty_pts	MEDIUMIN T	any integer from 0 to 16777215	
		Emp_id	INT(0, 999999999)	The set of 9 digit social security numbers	

Table	Table Description	Primary Key	Super Key	4	Attributes			Foreign Key
Delivers	Relationship between cook and room	Emp_id, Room_Number	(Emp_id, Room_Number)		Attribute	bute Data Type Domain		Emp_id, Room_Number
					Emp_id	INT(0, 999999999)	The set of 9 digit social security numbers	
					Room_numbe	SMALLINT	any integer from 1 to 200	

Table	Table Description	Primary Key	Super Key	4	Attributes			Foreign Key
Orders	Relationship between guest and cook	Emp_id, G_no	(Emp_id, G_no)	١,		ı		Emp_id, G_no
	and cook				Attribute	Data Type	Domain	
					Emp_id	INT(0, 99999999)	The set of 9 digit social security numbers	
					G_no	VARCHAR(2 0)	The set of characters that make up a driver's license number	

Table Table Description Primary Key Super Key Attributes Foreign Key	Table	Table Description	Primary Key	Super Key	Attributes	Foreign Key
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							1
Clean	Relationship between room and housekeeping	Emp_id, Room_number	(Emp_id, Room_number)	Agenting	Date To-	Domesia	Emp_id, Room_number
				Attribute	Data Type	Domain	
				Emp_id	INT(9999999 99)	The set of 9 digit social security numbers	
				Room_numbe	SMALLINT	any integer from 1 to 200	
Table	Table Description	Primary Key	Super Key	Attributes			Foreign Key
Socials	The different social medias	Hotel_Code, Handle	(Hotel_Code,		1	1	Hotel_Code
	that can belong to the hotel		Handle, Social_Media_Na me)	Attribute	Data Type	Domain	
				Hotel_Code	VARCHAR	any string	
				Handle	VARCHAR	any string	
				Social_Media _Name	VARCHAR	any string	
Table	Table Description	Primary Key	Super Key	Attributes			Foreign Key
Interact	How concierge interacts with	Emp_id, G_id	(Emp_id, G_id)		-		Emp_id, G_id
	guests			Attribute	Data Type	Domain	
				Emp_id	INT(9999999 99)	The set of 9 digit social security numbers	
				G_id	VARCHAR(2 0)	The set of characters that make up a driver's license number	
					•	<u> </u>	
	1	Ι		ī			Ī
Table	Table Description	Primary Key	Super Key	Attributes			Foreign Key
Convey_request	How concierge interacts with guests	Emp_id, Dno	(Emp_id, Dno)	Attribute	Data Type	Domain	Emp_id, Dno
				Emp_id	INT(9999999 99)	The set of 9 digit social	
					,,,	security numbers	
				Dno	VARCHAR	A set of integers ranging from 1 to 99	
Table	Table Description	Primary Key	Super Key	Attributes			Foreign Key
	1,,,,,	l	I	1			I

Table	Table Description	Primary Key	Super Key	Attributes				Foreign Key
Car_plates	Multi-valued attribute if a guest has more than one car	G_no, Plate_no	(G_no, Plate_no)	l۲				G_no
	guest has more than one car			Ц	Attribute	Data Type	Domain	
					G_no	VARCHAR(2 0)	The set of characters that make up a driver's license number	
					Plate_no	VARCHAR(1 0)	any alphabetical string	

	1	1		1			1
Table	Table Description	Primary Key	Super Key	Attributes			Foreign Key
Rooms_booked	Multi-valued attribute if a	G_id, room_num	(G_no, Plate_no)				G_no
	guest has more than one car			Attribute	Data Type	Domain	
				G_no	VARCHAR(2 0)	The set of characters that make up a driver's license number	
				Plate_no	VARCHAR(1 0)	any alphabetical string	
				•			
Table	Table Description	Primary Key	Super Key	Attributes			Foreign Key
Take_action	Relationship between feedback and department. Department's improvement from previous guests' feedback	Dep_no, F_id	Dep_no, F_id				Dep_no, F_id
				Attribute	Data Type	Domain	
				Dep_no	VARCHAR	A set of integers ranging from 1 to 99	
				F_id	CHAR(12)	any string	
Table	Table Description	Primary Key	Super Key	Attributes			Foreign Key
Make_payment	Relationship between concierge and payment because concierge has the guest's credit card information		(I_id, Pay_id)				I_id, Pay_id
				Attribute	Data Type	Domain	2.9.32
				I_id	CHAR(12)	any String	
				Pay_id	CHAR(12)	any number	
				<u> </u>			
Table	Table Description	Primary Key	Super Key	Attributes			Foreign Key
Request	Relationship between concierge and payment because concierge has the guest's credit card information	G_id, Dno	(G_id, Dno)				G_id, Dno
				Attribute	Data Type	Domain	G_a, più
				G_id	VARCHAR(2 0)	The set of characters that make up a driver's license number	
				Dno	VARCHAR	A set of integers ranging from 1 to 99	
	l .						i .

• The names of the tool(s) used for the ERD and the schema diagram.

The name of the tool used for the ERD is Goodnotes. We used lucidchart to create the schema diagram.