Unnormalized Golf Club Scenario

member_name	email	phone_number	family	member_since	membership_type	visit_datetime	course	golf_car_serial_numb	golf_car_make	golf_car_model
Daniel Ford	dford@example.com	212-342-2451	{"partner": "Jake Smith (jsr	2017-01-01	Family	2018-06-12 12:34:54	18-hole	0f2f85nv82	Yamaha	CONCIERGE 4
Jane Cooper	jcooper@example.com	623-523-1634		2017-08-12	Individual	2018-07-01 10:39:11	9-hole	nmvo4810a2	Garia	2+2
Alice Hudson	ahudson@example.com	726-734-2157	{"partner": "Peter Tars (pta	2016-04-23	Family	2019-08-01 11:42:55	18-hole	j30c14nm4f	Yamaha	CONCIERGE 6
Alice Hudson	ahudson@example.com	726-734-2157	{"partner": "Peter Tars (pta	2016-04-23	Family	2019-09-16 18:00:45	9-hole	0f2f85nv82	Yamaha	CONCIERGE 4

1st Normal Form (1NF)

Add comments and tables (with sample data)

member

member_id	member_name	email	phone_number	member_since	membership_type	partner	partner's email	children	children's email	visit_datetime	course	golf_car_serial_r	golf_car_make	golf_car_model
1	Daniel Ford	dford@example.cc	212-342-2451	2017-01-01	Family	Jake Smith	jsmith@example.c	Chris Ford	cford@example.cc	2018-06-12 12:34:54	18-hole	0f2f85nv82	Yamaha	CONCIERGE 4
2	Jane Cooper	jcooper@example	623-523-1634	2017-08-12	Individual					2018-07-01 10:39:11	9-hole	nmvo4810a2	Garia	2+2
3	Alice Hudson	ahudson@exampl	726-734-2157	2016-04-23	Family	Peter Tars	ptars@example.cc	Jenna Tars	itars@example.cor	2019-08-01 11:42:55	18-hole	j30c14nm4f	Yamaha	CONCIERGE 6
3	Alice Hudson	ahudson@exampl	726-734-2157	2016-04-23	Family	Peter Tars	ptars@example.cc	Anna Tars	atars@example.cc	2019-08-01 11:42:55	18-hole	j30c14nm4f	Yamaha	CONCIERGE 6
3	Alice Hudson	ahudson@exampl	726-734-2157	2016-04-23	Family	Peter Tars	ptars@example.cc	Anna Tars	atars@example.cc	2019-09-16 18:00:45	9-hole	0f2f85nv82	Yamaha	CONCIERGE 4
3	Alice Hudson	ahudson@exampl	726-734-2157	2016-04-23	Family	Peter Tars	ptars@example.cc	Anna Tars	atars@example.cc	2019-09-16 18:00:45	9-hole	0f2f85nv82	Yamaha	CONCIERGE 4

COMMENT: In 1NF, I added unique member_id as column in order to better recognize each member's information, inclduing their personal information and visit information.

Also, I added partner, partner's email, children, and children's email as columns to split information from family column. It would be more specific as atmoic in this case.

2nd Normal Form (2NF)

Add comments and tables (with sample data)

member

member_id	member_name	email	phone_number	member_since	membership_type
1	Daniel Ford	dford@example.co	212-342-2451	2017-01-01	Family
2	Jane Cooper	jcooper@example	623-523-1634	2017-08-12	Individual
3	Alice Hudson	ahudson@exampl	726-734-2157	2016-04-23	Family

visit

visit_id	visit_datetime	course	golf_car_serial_number
1	2018-06-12 12:34:54	18-hole	0f2f85nv82
2	2018-07-01 10:39:11	9-hole	nmvo4810a2
3	2019-08-01 11:42:55	18-hole	j30c14nm4f
4	2019-09-16 18:00:45	9-hole	0f2f85nv82

partner

member_id	member_name	partner	partner's email
1	Daniel Ford	Jake Smith	jsmith@example.com
3	Alice Hudson	Peter Tars	ptars@example.com

children

member_id	member_name	children	children's email
1	Daniel Ford	Chris Ford	cford@example.com
3	Alice Hudson	Jenna Tars	jtars@example.com
3	Alice Hudson	Anna Tars	atars@example.com

golf_car

golf_car_serial_numbe	golf_car_make	golf_car_model
0f2f85nv82	Yamaha	CONCIERGE 4
nmvo4810a2	Garia	2+2
j30c14nm4f	Yamaha	CONCIERGE 6

COMMENT: In 2NF, I split the original table into member, visit, golf_car, partner and children, to ensure there is no partial dependency.
For example, because for each visit the member can rent more than 1 golf car, so the golf car needs to be created as a separate table.
And the golf car model and make can be called based on the serial number only, not the visit_ic.

3rd Normal Form (3NF)

Add comments and tables (with sample data)

member

member_id	member_name	email	phone_number	member_since	membership_type	membership_id
1	Daniel Ford	dford@example.cd	212-342-2451	2017-01-01	Family	1
2	Jane Cooper	jcooper@example	623-523-1634	2017-08-12	Individual	2
3	Alice Hudson	ahudson@exampl	726-734-2157	2016-04-23	Family	1

membership_type

member_name	membership_type
Daniel Ford	Family
Jane Cooper	Individual
Alice Hudson	Family

partner

member_id	partner	partner's email
1	Jake Smith	jsmith@example.com
3	Peter Tars	ptars@example.com

visit

visit_id	visit_datetime	course	golf_car_serial_number	course_id
1	2018-06-12 12:34:54	18-hole	0f2f85nv82	1
2	2018-07-01 10:39:11	9-hole	nmvo4810a2	2
3	2019-08-01 11:42:55	18-hole	j30c14nm4f	1
4	2019-09-16 18:00:45	9-hole	0f2f85nv82	2

children

member_name	children	children's email
1	Chris Ford	cford@example.com
3	Jenna Tars	jtars@example.com
3	Anna Tars	atars@example.com

course_type

course_id	course
1	18-hole
2	9-hole

golf_car

golf_car_serial_numbe	golf_car_model
0f2f85nv82	CONCIERGE 4
nmvo4810a2	2+2
j30c14nm4f	CONCIERGE 6

golf_car_make

golf_car_make_id	golf_car_make
1	Yamaha
2	Garia

COMMENT: In 3NF, membership_type is determined by member_name in this case. And partner and children information is determined by member_name.
Moreover, golf_car_model is determined by make-id.
course_id is to determind the course type wether 18-hole or 9-hole in this case.