

Color coding: Green background is for weak entities. Yellow background is for entities that inherit. Gray backgrounds are for entities that are inherited from. Red background is for cross-reference table. Cyan is for ENUMs.

skill_level (ENUM)
Beginner
Intermediate
Advanced

All the database_id attributes which are also primary keys and ints have been set to SERIAL which means they automatically have unique values.

Students can have siblings enrolled. If they have siblings they are eligible for discounts.

bridge_sibling		
PK,FK	sibling_id_1	int NOT NULL
PK,FK	sibling_id_2	int NOT NULL

enrollment_applications		
	application_id	varchar(100) UNIQUE NOT NULL
	cover_letter	text
	application_date	date

phone		
PK	phone_number	varchar(500) UNIQUE NOT NULL
FK	student_db_id	int
FK	administrator_db_id	int
FK	instructor_db_id	int

address		
PK	database_id	SERIAL UNIQUE NOT NULL
	street_address	varchar(500) NOT NULL
	zip_code	varchar(10) NOT NULL
	city	varchar(100) NOT NULL
FK	student_db_id	int
FK	administrator_db_id	int
FK	instructor_db_id	int

We can't only use person_id as primary key, since that is not unique. A person can be proficient in many instruments. So the set of instrument and person_id is the primary key.

student_id and employee_id are not primary keys. They are not database database_id:s. They are id:s owned by the business.

skill_level can only be 'Beginner', 'Intermediate', and 'Advanced'.

Time slots exist even without lessons. They will just show up as empty spots in the schedule.

rented_instrument		
	receipt_id	varchar(100) UNIQUE NOT NULL
PK	start_date	timestamp NOT NULL
	end_date	timestamp
PK,FK	student_db_id	int NOT NULL
PK,FK	instrument_db_id	int NOT NULL

student		
	student_id	varchar(100) NOT NULL

price_table		
	private_lesson_base_price	int
	ensemble_lesson_base_price	int
	group_lesson_base_price	int
	sibling_discount_modifier	float
PK	start_date	date NOT NULL
PK	end_date	date

administrators		
	employee_id	varchar(100) NOT NULL
	salary	int

instructors		
	employee_id	varchar(100) NOT NULL

proficiencies		
PK	instrument	varchar(100) NOT NULL
PK,FK	instructor_db_id	int NOT NULL
	skill_level	ENUM NOT NULL

physical_instruments		
PK	database_id	SERIAL UNIQUE NOT NULL
	instrument_type	varchar(100) NOT NULL
	instrument_id	varchar(50) UNIQUE NOT NULL
	brand	varchar(50) NOT NULL
	price	int NOT NULL

private_lesson		
	instrument	varchar(100) NOT NULL
FK	instructor_db_id	int NOT NULL

lesson		
PK	database_id	SERIAL UNIQUE NOT NULL
	lesson_id	varchar(100) UNIQUE NOT NULL
	skill_level	ENUM NOT NULL

booking_table		
PK	database_id	SERIAL UNIQUE NOT NULL
	date	date NOT NULL
	time	time NOT NULL
	classroom	varchar(100) NOT NULL
FK	private_lesson_db_id	int
FK	ensemble_db_id	int
FK	group_lesson_db_id	int

ensemble		
	genre	varchar(100) NOT NULL
	min_number_of_students	int NOT NULL
	max_number_of_students	int NOT NULL
FK	instructor_db_id	int NOT NULL

group_lesson		
	instrument	varchar(100) NOT NULL
	min_number_of_students	int NOT NULL
	max_number_of_students	int NOT NULL
FK	instructor_db_id	int NOT NULL

bridge_student_to_booking		
PK,FK	student_db_id	int NOT NULL
PK,FK	booking_db_id	int NOT NULL