

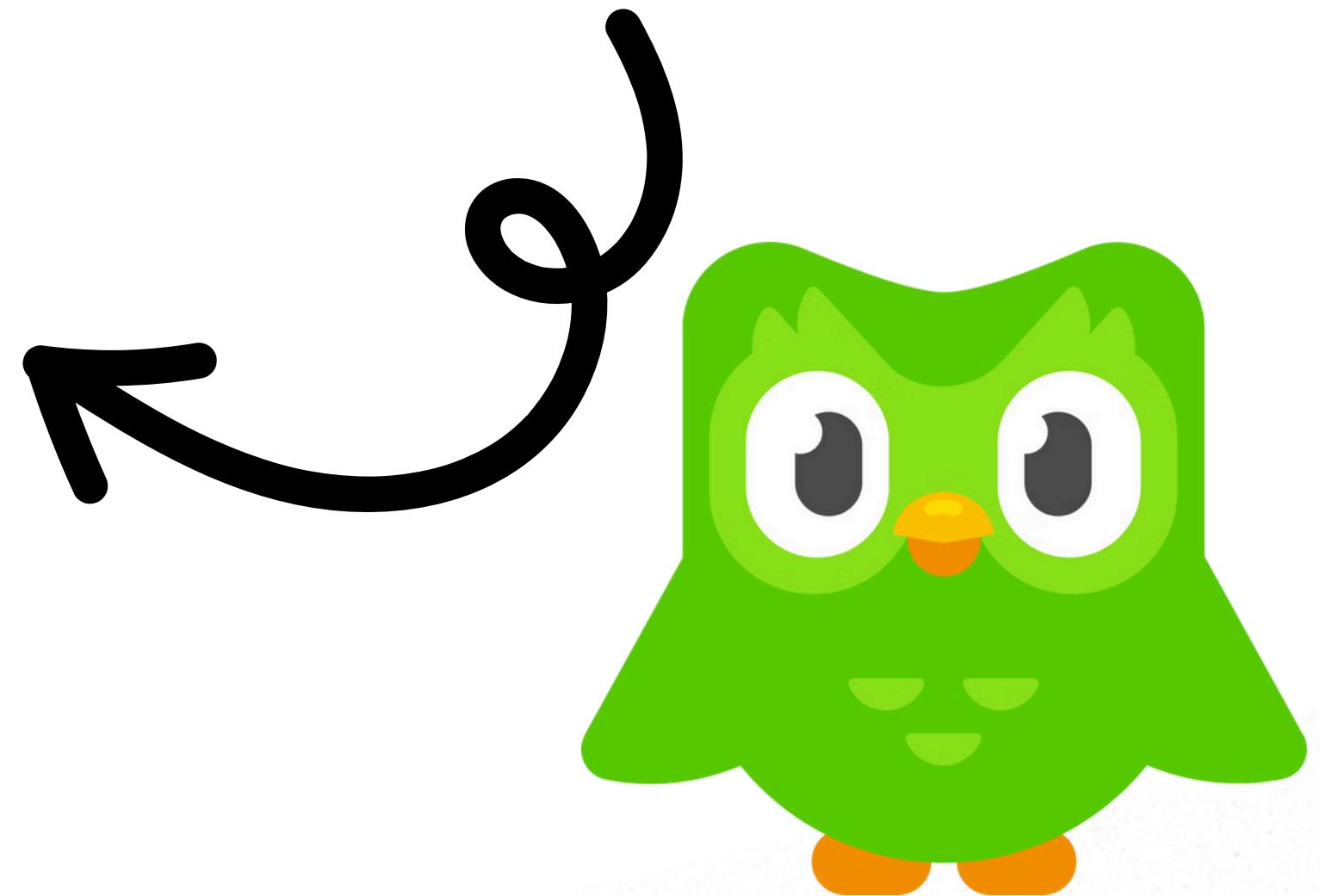
DUOLINGO

APP

**BY: MARLON YECID RIVEROS
BRAYAN ESTIVEN AGUIRRE**

Duolingo is a language-learning platform that employs a freemium business model. Users can access basic features for free, while advanced features, such as personalized learning plans and progress tracking, are available through subscriptions.

BUSINESS MODEL



FREEMIUM

Users can access core language learning features for free, including basic lessons, vocabulary exercises, and a limited set of language skills.

and Subscriptions

Duolingo Plus, a paid subscription, provides enhanced learning tools such as offline access, unlimited hearts, and personalized learning paths.





DATA REQUIRED: USER PROFILES, LEARNING PROGRESS, AND PREFERENCES

It needs user registration and authentication to create and manage accounts, as well as the storage of user information to track progress. A catalog of available languages allows users to choose their target language



MORE DATA

USER PROFILES

name, nickname, joinDate, division,
timesInTop, email, password, courses,
achievements, followed, followers,
gemsNumber, livesNumber,
boostersNumber, isPremium.

COURSES

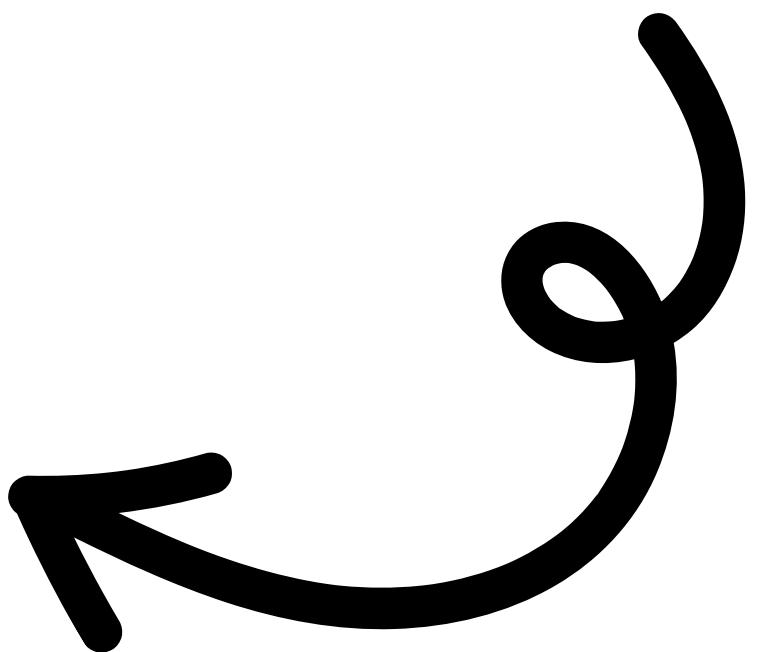
language, Stages, Sounds, id, Stages,
Section, Lesson, Question

ACHIEVEMENT

name, progress, streakDays, DailyEXP,
WeeklyEXP, TotalEXP, percentage

ERM

To get to the entity relationship model in the Duolingo application we must first analyze the structure of the application





LEARN

LEADERBOARDS

QUESTS

SHOP

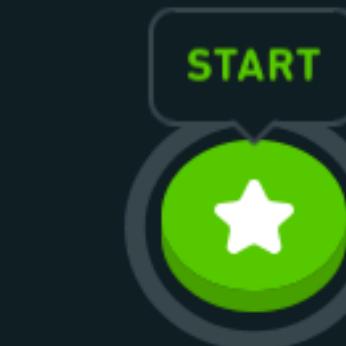
PROFILE

MORE

← SECTION 1, UNIT 1

Form basic sentences

GUIDEBOOK



We see that there are a lot of options on the platform, so by exploring we find the requirements to start designing a database

STEP 1: DEFINE COMPONENTS



The application requires several key components to function effectively.

Some of those components can be:

User registration and

authentication. Catalog of available

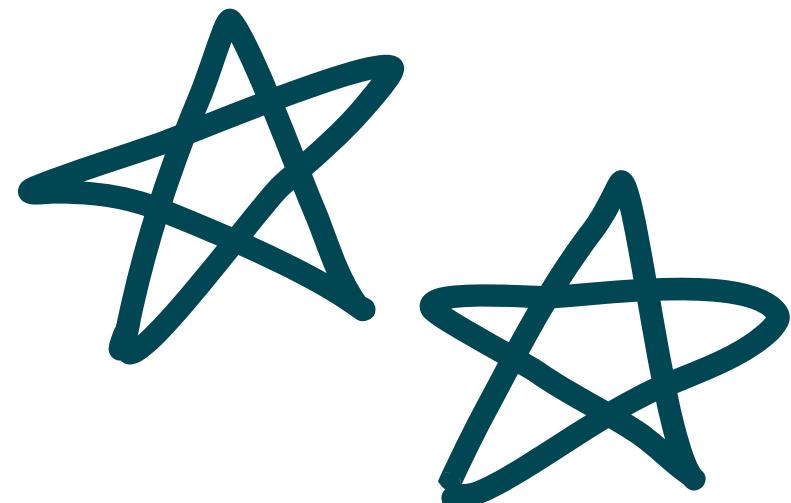
languages to learn. Structuring lessons

by language.



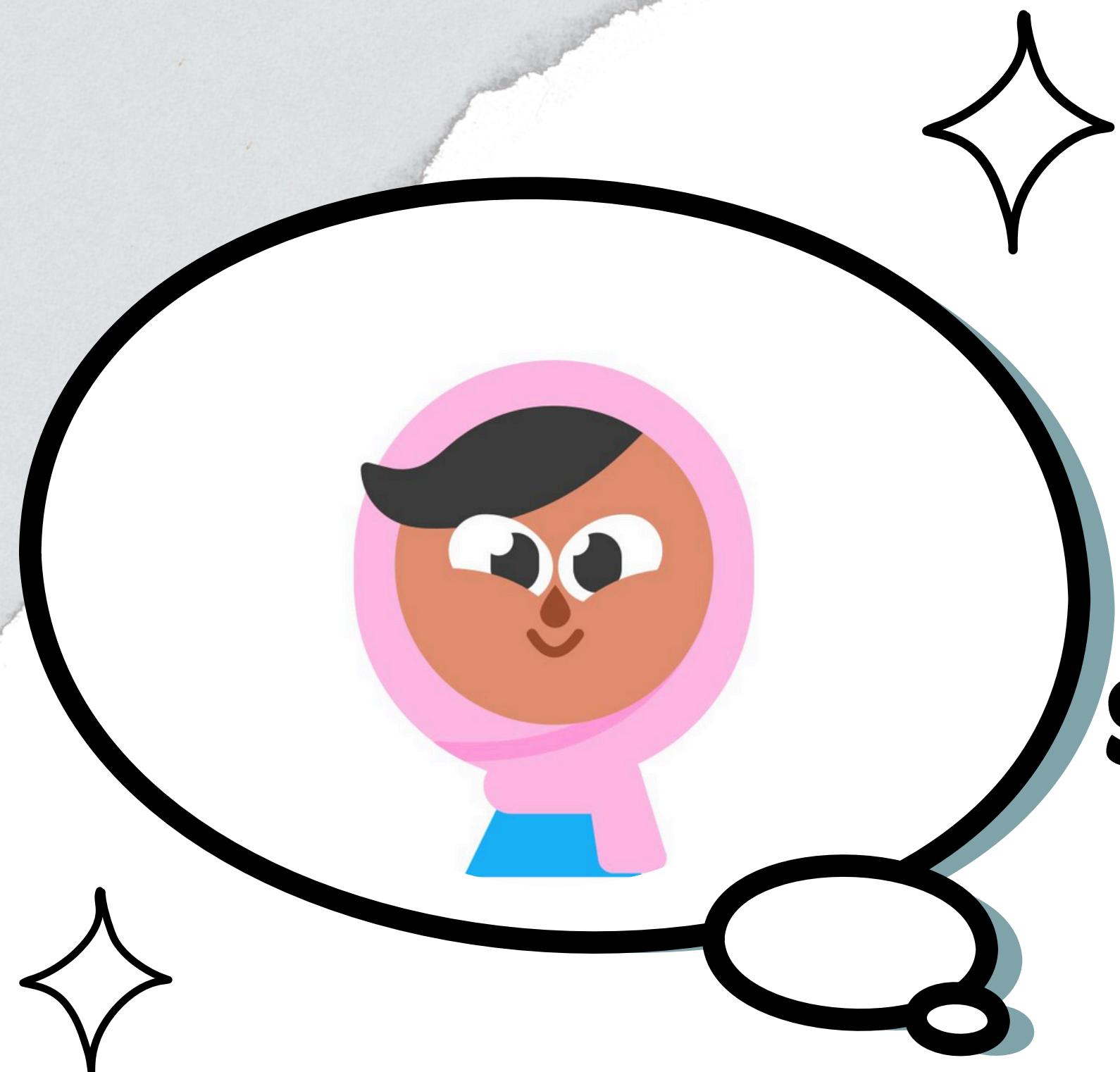
- User
- Course
- Stage
- Section
- Lesson
- Question

- Division
- challenges
- Boosters
- Achievement
- Progress



STEP 2: DEFINE ENTITIES

STEP 3: DEFINE ATTRIBUTES



In this step we explain each of the entities that we define, and we see what attributes each of these needs.

Step 4: Define Relationships

We used a table with the entities, marking with a color which relationships they had with each other.

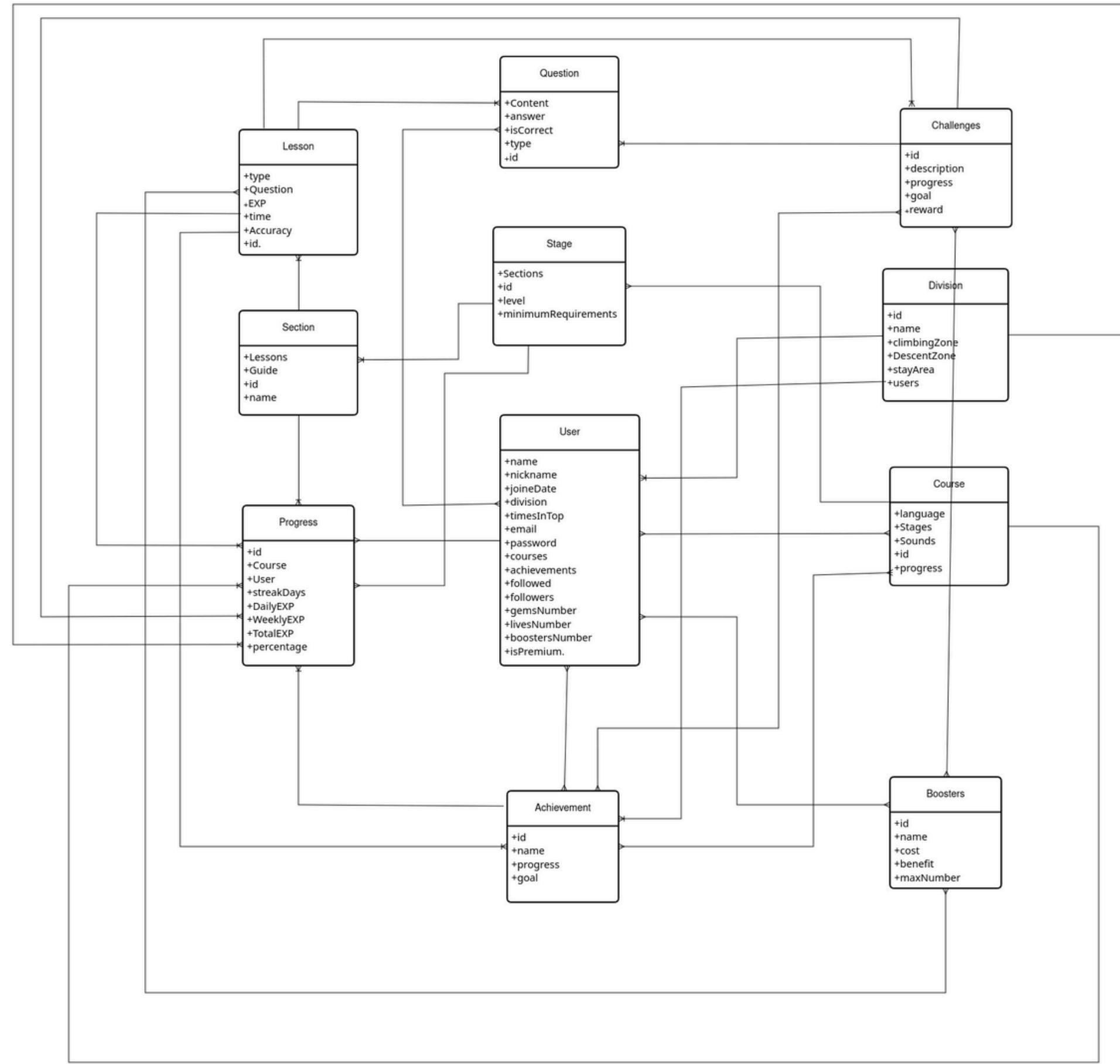
STEP 5: DEFINE RELATIONSHIPS

TYPES

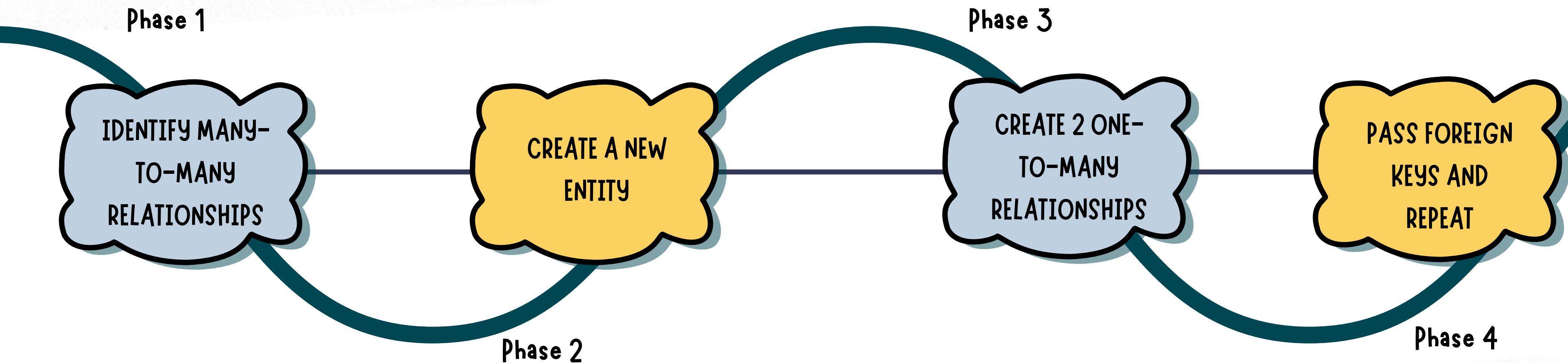


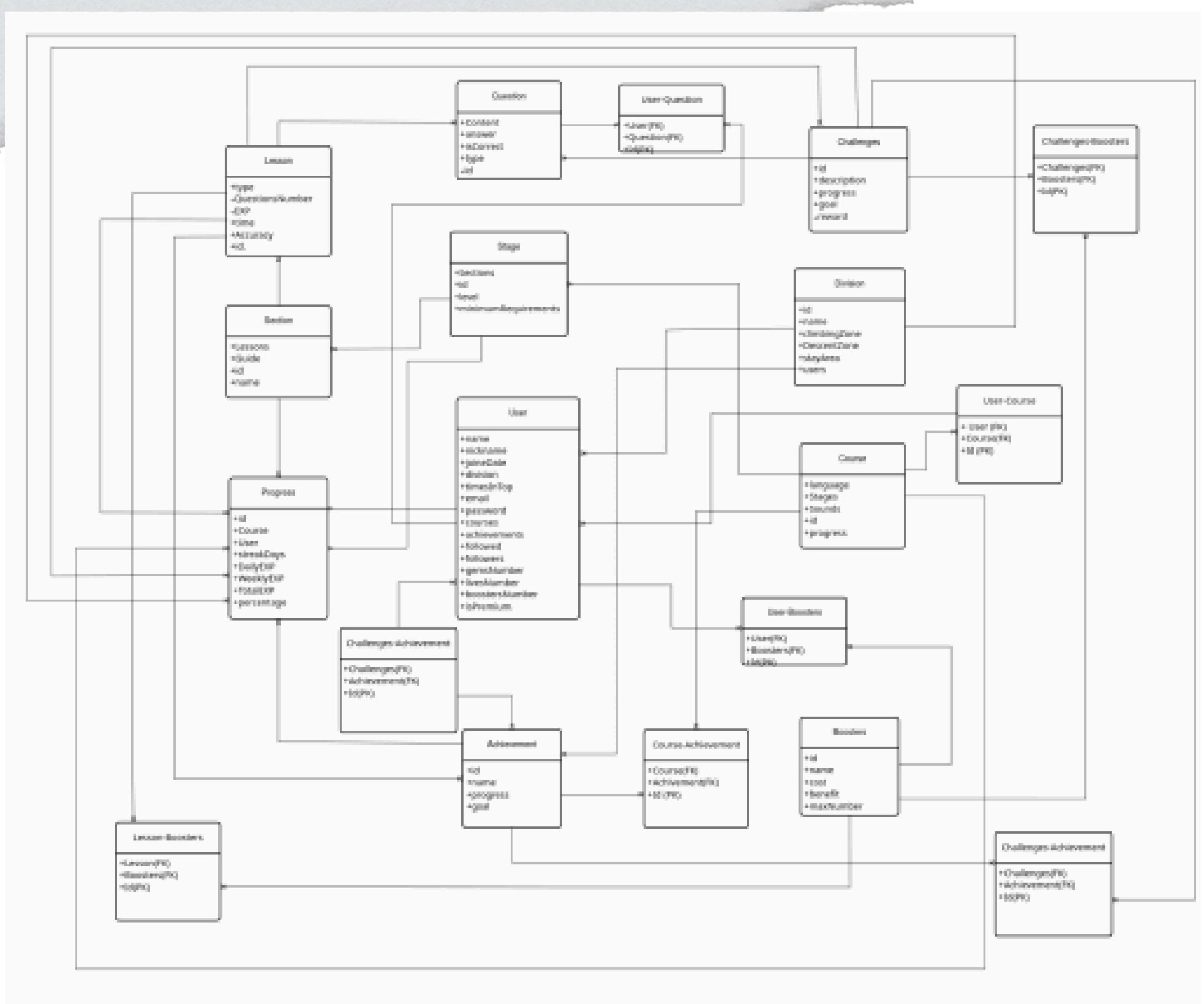
Reviewing the previous step, we focus on carefully reviewing each of the relationships to determine its type, that is, if it is one to one, one to many, or many to many.

STEP 6: FIRST ENTITY-RELATIONSHIP DRAW



STEP 7: FIRST SPLIT MANY-TO-MANY RELATIONSHIPS





STEP 8: SECOND ENTITY-RELATIONSHIP DRAW



STEP 9: GET DATA-STRUCTURE



In this step what was done was to

assign the data type corresponding to
each of the attributes for our entities

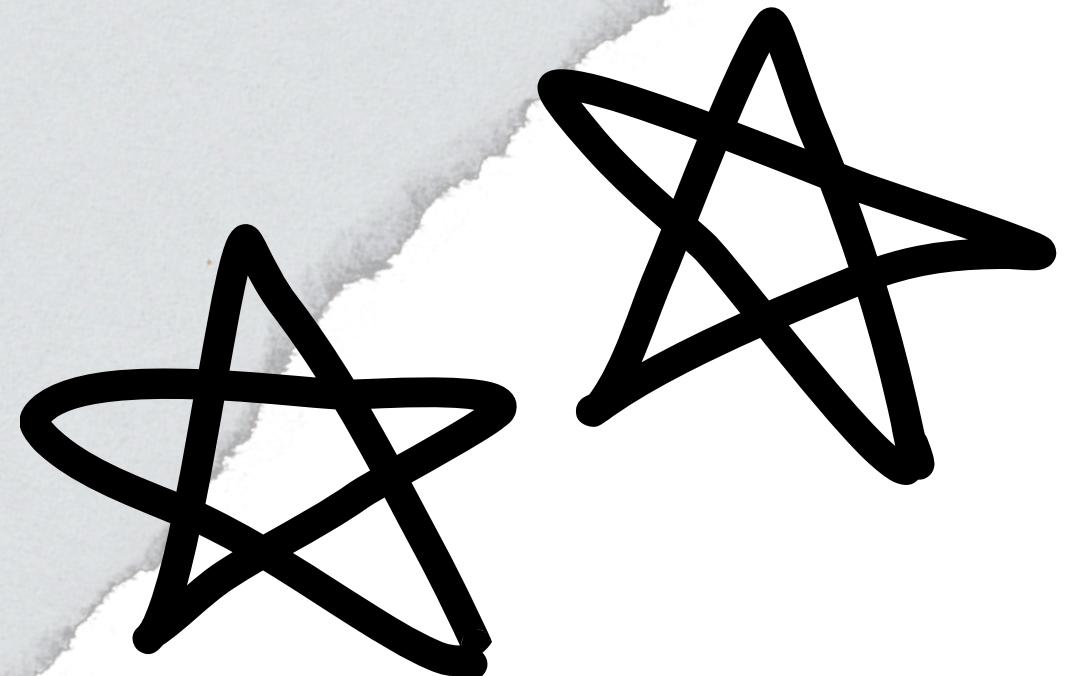
Step 10: Define Constraints and Properties of Data

We used a table with the entities,

marking with a color which

relationships they had with each other.

Don't forget to take your lessons or your pet will be kidnapped



THANK YOU

WE HOPE YOU
LIKED IT

