Tables:

App user - This entity represents a user on the platform.

Code Language - This entity contains the different coding languages supported by the platform

Challenge - This entity on the data model maps directly to the challenges identified on the requirements section (cross reference). The challenge has a many to one relationship with the user table, this relationship represents the creator of the challenge which can create multiple challenges. This is a weak entity of user, i.e., does not exist if there is no user.

Challenge Solution - This entity represents the solution to the challenge. It is on a separate table to allow defining multiple solutions per Challenge (many to one relationship), one for each language. This is a weak entity of Challenge, i.e., does not exist if there is no Challenge. This table has a one to many relationship with the code language table because each answer is written for a specific supported language.

Challenge Answer - This entity represents an answer of a challenge. There is a many to one relationship with the challenges since a challenge can be answered by multiple different people, as a result this table also has a many to one relationship with the user table. This is a weak entity of Challenge, i.e., does not exist if there is no Challenge.

Questionnaire - This entity on the data model maps directly to the questionnaires identified on the requirements section (cross reference). The questionnaire has a many to one relationship with the user table, this relationship represents the creator of the questionnaire which can create multiple questionnaires. This is a weak entity of user, i.e., does not exist if there is no user.

Questionnaire Answer - This entity represents an answer of a questionnaire. There is a many to one relationship with the questionnaires since a questionnaire can be answered by multiple different people. This is a weak entity of Questionnaire, i.e., does not exist if there is no Questionnaire.

Answer - This entity represents the abstract concept of an answer, which is specified (por o que esta no relatorio, Answer - Challenge Answer - Questionnarie Answer). This table has a one to many relationship with the code language table because each answer is written for a specific supported language.

Tag - This entity supports the tag search functionality identified on the requirements section (cross reference). There is a one to many relationship with the challenges since a challenge can have multiple tags. This is a weak entity of Challenge, i.e., does not exist if there is no Challenge.

Connections:

Challenge - Questionnaire – Questionnaire Answer