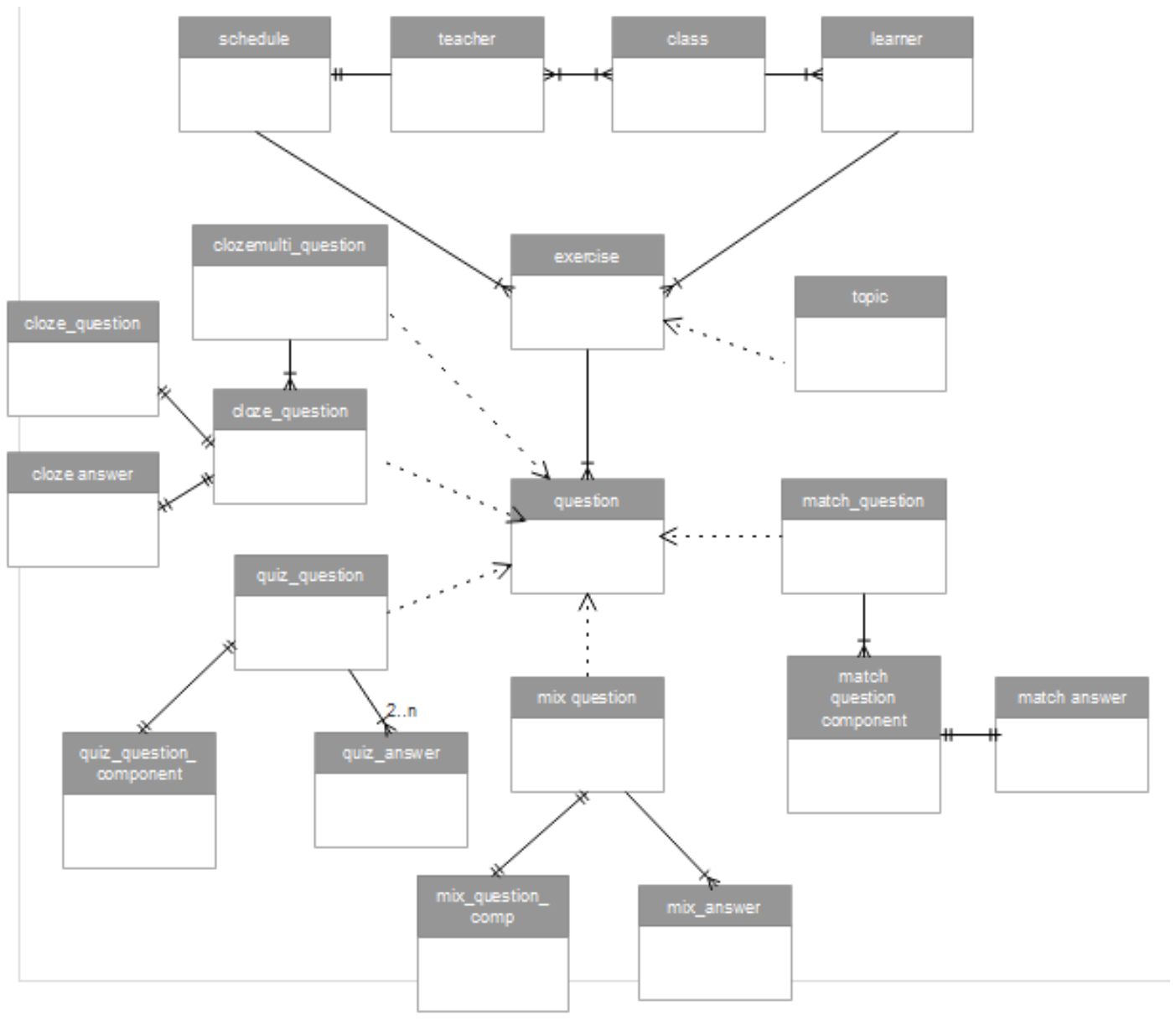# Business rules report

The things of interest:

- Teacher
- Learner
- Class
- Schedule
- Exercises
- Questions (Mix, Match, cloze, clozemulti, quiz)
- Answers (mix_answer, match_answer, cloze_answer, clozemulti_answer, quiz_answer)
- Topic
- Questions component (Mix_question_component, Match_question_component, cloze_question_component, clozemulti_question_component, quiz_question_component)

These things are related as follow:

- TEACHER has many CLASSES
- LEARNER has one CLASS
- TEACHER has one SCHEDULE
- LEARNER does one or many EXERCISES
- SCHEDULE can contain different EXERCISES
- EXERCISES relate to a particular TOPIC
- EXERCISES have one or more QUESTIONS
- EXERCISES can contain different QUESTIONS (type)
- QUIZ_QUESTION has one QUIZ_QUESTION_COMPONENT and at least two QUIZ_ANSWERS
- CLOZE_QUESTION has one CLOZE_QUESTION_COMPONENT and a CLOZE_ANSWER
- MIX_QUESTION has one MIX_QUESTION_COMPONENT and a variable numbers of MIX_ANSWERS
- MATCH_QUESTION has a number of MATCH_QUESTION_COMPONENT
- MATCH_QUESTION_COMPONENT has a MATCH_QUESTION and a correct MATCH_ANSWER.
- CLOZEMULTI_QUESTION is a collect of CLOZE_QUESTION and CLOZE_ANSWER
- QUIZ_ANSWER is an answer to a QUIZ_QUESTION, it can be correct or incorrect.
- MATCH_ANSWER is an answer to a MATCH_QUESTION_COMPONENT. It matches the MATCH_QUESTION_COMPONENT with the same order number.
- MIX_ASNWER is part of the answer to a MIX_QUESTION. It has a correct order

E/R diagram:

The E/R diagram shows the following entities and relationships:

- schedule
- teacher
- class
- learner
- clozemulti_question
- exercise
- topic
- cloze_question
- cloze_question
- cloze answer
- question
- match_question
- quiz_question
- mix question
- match question component
- match answer
- quiz_question_ component
- quiz_answer
- mix_question_ comp
- mix_answer

2..n

Legend:

- ··········< := extend
- ─X─X─X─ := 1 : 1 relationship
- ──────|< := 1...n relationship