

Business Rules

A User can be in many CourseSections
A CourseSection can have many users

A User doesn't have to be in a courseSection

A CourseSection can have one instructor
An Instructor can teach many CourseSections

A CourseSection does not need an Instructor
An Instructor does not need a CourseSection

A School can have many Courses
A Course can be in many Schools

A School does not need to have a Course
A Course needs to have a School

A Course can have only one Subject
A Subject can have many Courses

A Course must have a Subject
A Subject does not need to have a Course

A Course can have many Topics
A Topic can have many Courses

A Course does not have to have a Topic
A Topic does not have to have a Course

A Course can have many Sections
A Section can have only one Course

A Course does not have to have a Section
A Section must have a Course

An Answer can have many Votes
A Vote can only have one Answers

An Answer does not have to have a Vote
A Vote must have an Answer

A question can have many Votes
A Vote can only have one Questions

A Question does not have to have a Vote
A Vote must have a Question

An Explanation can be voted on many times
A Vote can only have one Explanations

An Explanation does not have a Vote
A Vote must have an Explanation

A User can have many Questions
A Question can only have one User

A User is not required to have a Question
A Question must have a User

A Question can have only one Topic
A Topic can have many Questions

A Question must have a Topic
A Topic does not need to have a Question

A Question can have only one Course
A Course can have many Questions

A Question is not required to have a Course
A Course is not required to have a question

A User can have many Explanations
Explanation
An Explanation can only have one User

A User does not need to have an
An Explanation must have a User

An Explanation can have only one Course
Course

An Explanation is not required to have a

A Course can have many Explanations
Explanation

A Topic can have many Explanations
explanation

An Explanation can be for one Topic

A Question can have many Answers
Answer

An Answer can only have one Question

A User can have many Quizzes

A Quiz can have many Users

A Quiz can have many Topics

A Topic can have many Quizzes

A Quiz can have many Questions

A Question can have many Quizzes

A Course is not required to have an

A Topic does not need to have an

An Explanation requires a topic

A Question does not have to have an

An Answer must have a Question

A User is not required to have a Quiz

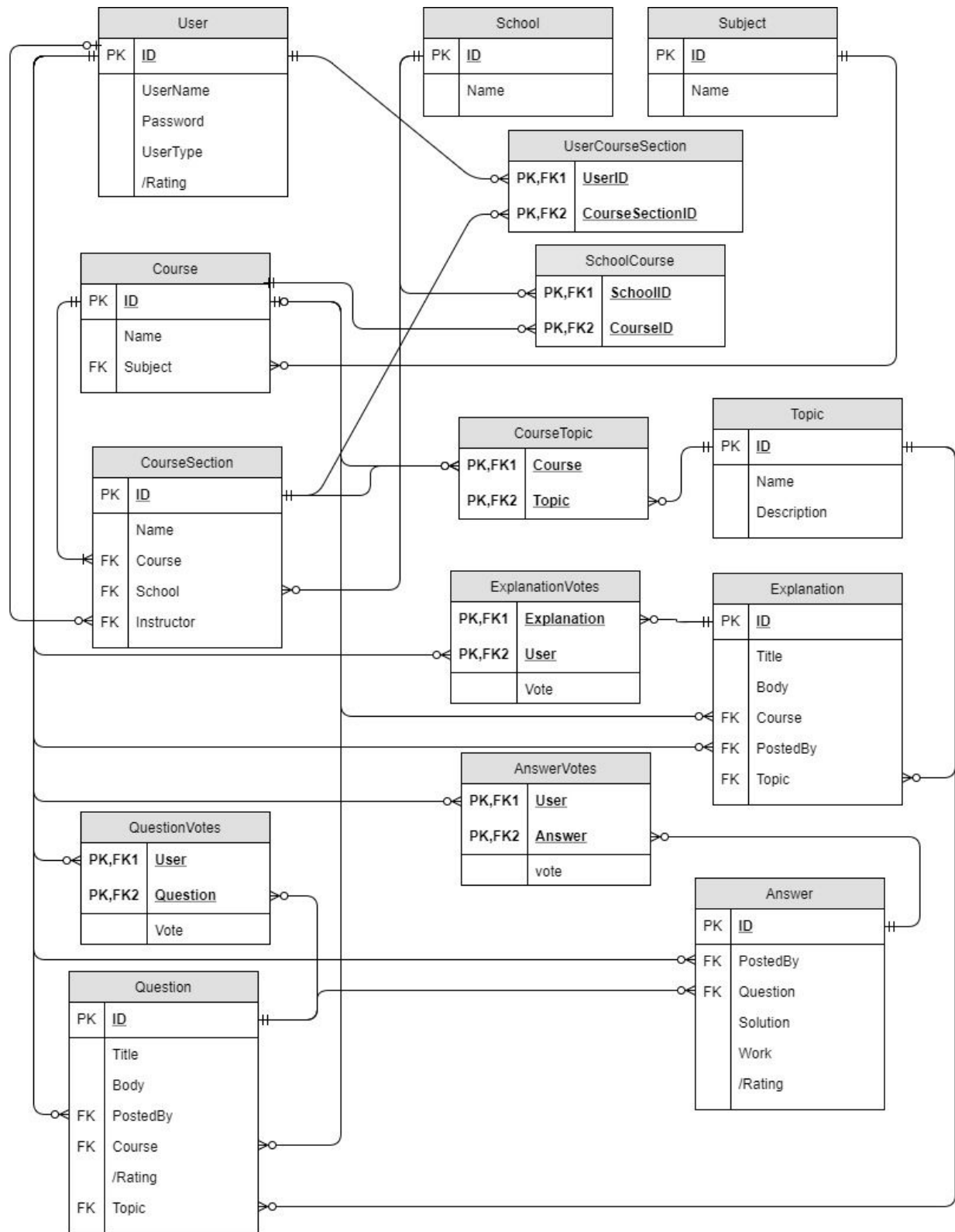
A Quiz must have a User

A Quiz must have at least one Topic

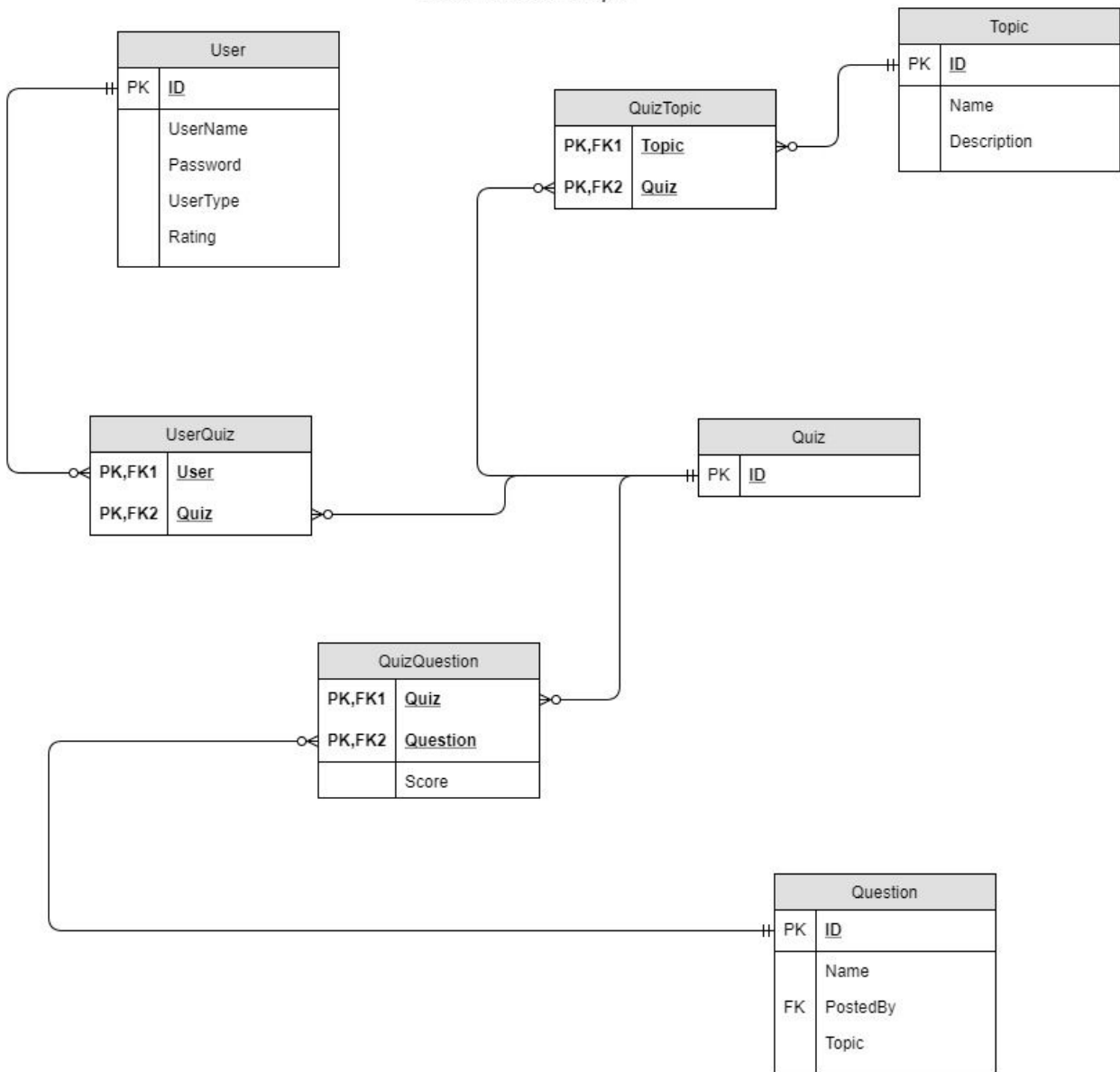
A Topic does not need to have a Quiz

A Quiz must have at least one Question

A Question does not need to have a Quiz



Quiz Relationships



Normalized Tables

User(UserID, UserName, Password, UserType)

School(SchoolID, Name)

Subject(SubjectID, Name)

Course(CourseID, Name, *SubjectID*)

SchoolCourse(SchoolID, CourseID)

UserCourseSection(UserID, CourseSectionID)

CourseSection(CourseSectionID, Name, *CourseID*, *InstructorID*)

CourseTopic(CourseID, TopicID)

Topic(TopicID, Name, Description)

Explanation(ExplanationID, *TopicID*, Title, Body, *PostedBy*, *CourseID*)

ExplanationVotes(Explanation, User, Vote)

Question(QuestionID, Title, Body, *PostedBy*, *CourseID*, *TopicID*)

QuestionVotes(Question, User, Vote)

Answer(AnswerID, *QuestionID*, *PostedBy*, Solution, Work)

AnswerVotes(Answer, User, Vote)

Quiz(QuizID)

QuizTopic(Topic, Quiz)

UserQuiz(User, Quiz)

QuizQuestion(Quiz, Question, Score)