Development environment and operating environment

Development environment:

IDE: Android studio;

Database:sqlite;
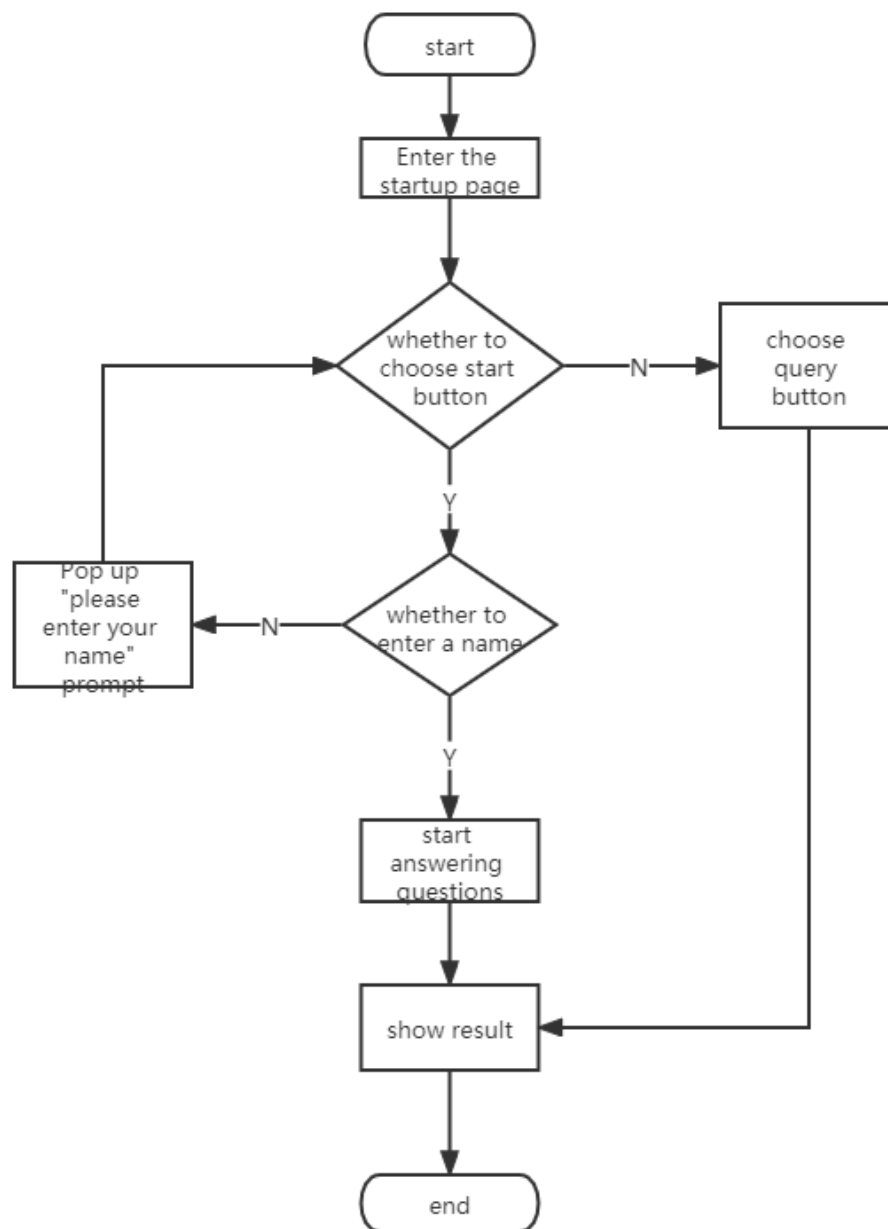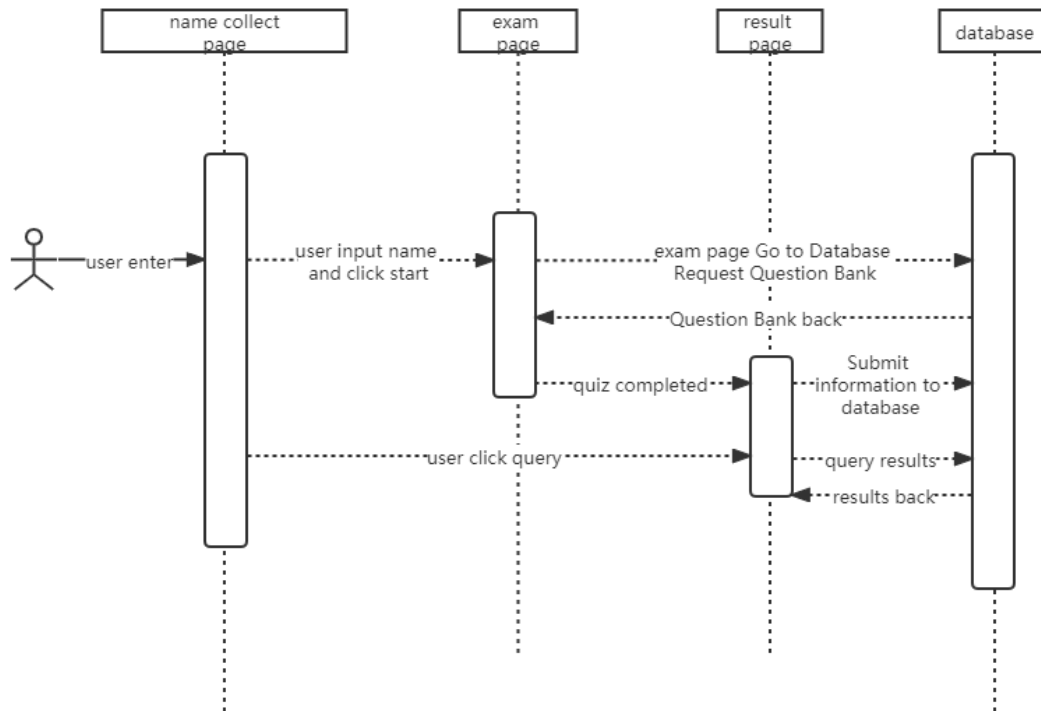
Java environment:jdk 1.8

operating environment:

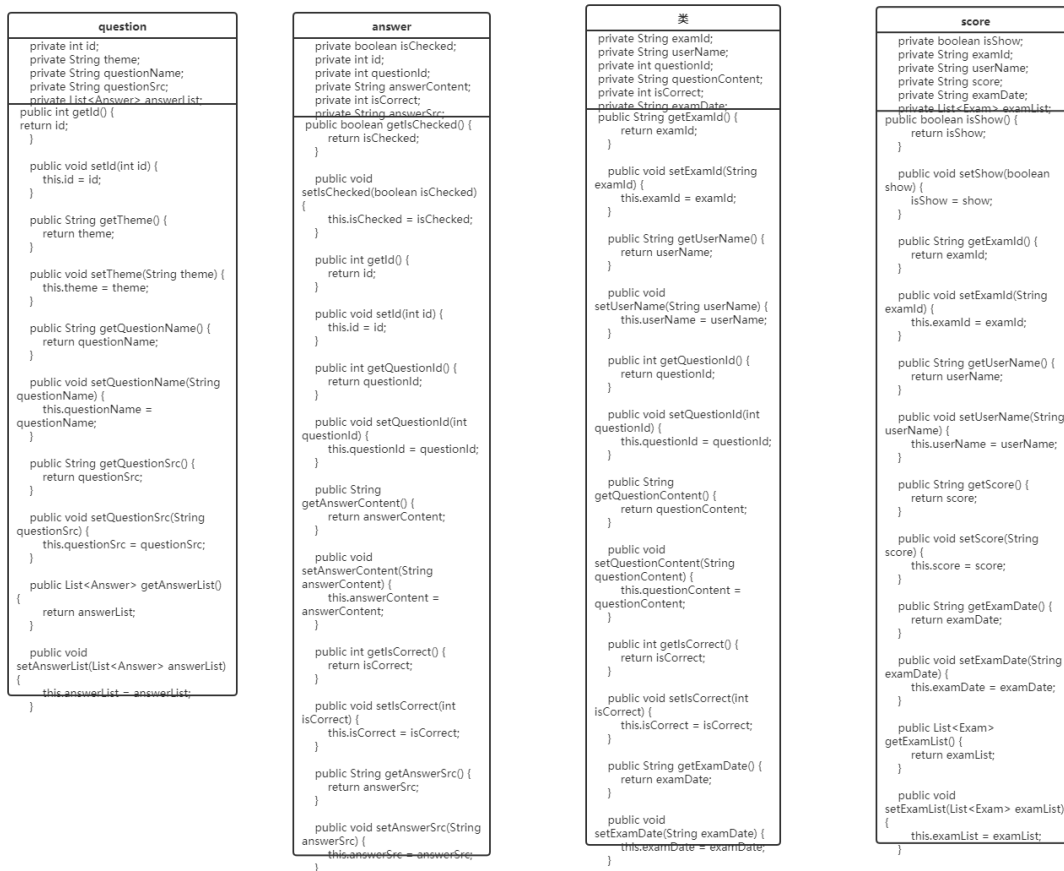For Android 7.0 and above

Detailed design

The system Flow Chart is shown in the following figure:

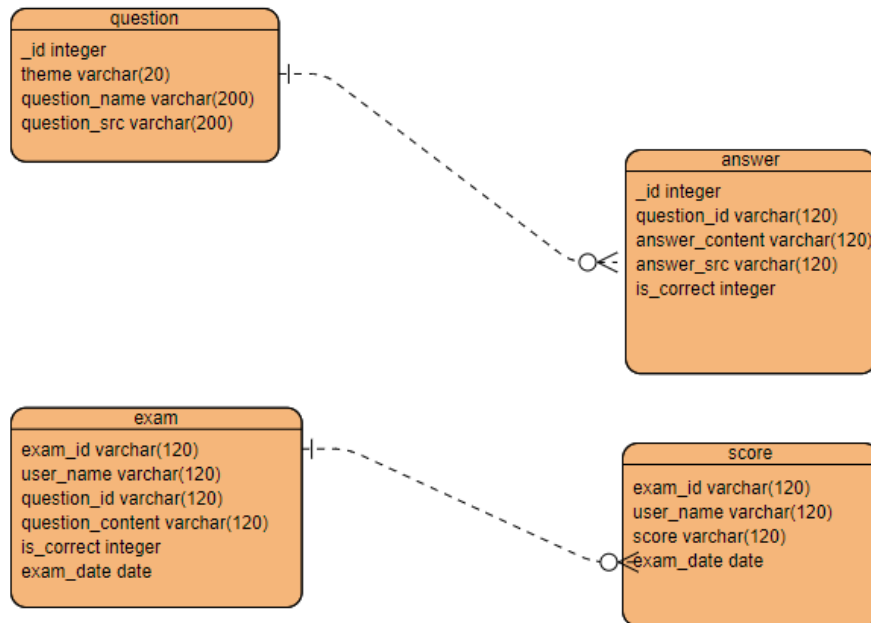The system Sequence Diagram is shown in the following figure:

The system Class Diagram is shown in the following figure:

DataBase design

This project builds 4 tables, question, answer, exam, score, and the design database table ERD is as follows:

database:

question table: _id integer (unique id), theme varchar(20) (question topic), question_name varchar(200) (question name), question_src varchar(200) (question image path)

answer table: _id integer (unique id), question_id varchar(120) (question id), answer_content varchar(120) (answer content), answer_src varchar(120) (answer image path), is_correct integer) (is it the correct answer)

Exam table: exam_id varchar(120) (unique id), user_name varchar(120)

(person name), question_id varchar(120) (question id), question_content varchar(120) (question content), is_correct integer (whether it is correct) , exam_date date (exam date))

Score table: exam_id varchar(120) (exam id), user_name varchar(120) (person name), score varchar(120) (true or false), exam_date date (date)

Difficulties

In the development of this project, each question has 8 options and there must be a correct answer. At the beginning, 5 out of the 8 options sometimes have no correct answer. Therefore I tried to filter out the correct answer first, then select the remaining 7 randomly, which is drawing 4 out of 5 options.