Development environment and operating environment

Development environment:

IDE: Android studio;

Database:sqlite;

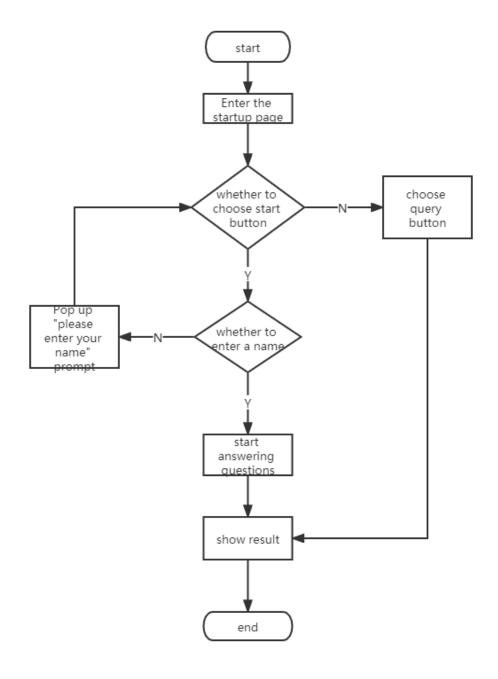
Java environment:jdk 1.8

operating environment:

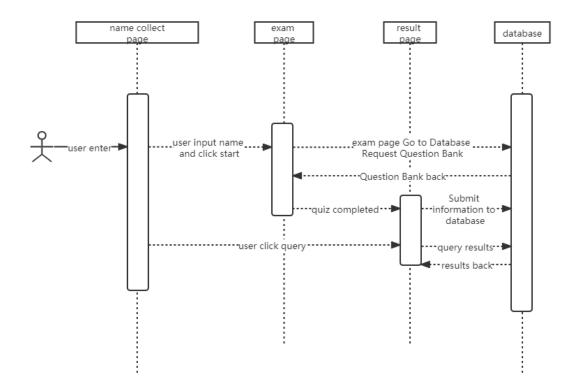
For Android 7.0 and above

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:

```
private boolean isChecked;
private int ld;
private int ld;
private int ld;
private int log;
private int log;
private int log;
private int log;
private String answerContent;
private String answerCore
public boolean isChecked) {
    return isChecked;
}

public void
setlsChecked(boolean isChecked) {
    this.isChecked = isChecked;
}

public int getld() {
    return id;
}

public void setld(int id) {
    this.id = id;
}

public void setld(int id) {
    this.id = id;
}

public void setld(int id) {
    return questionId;
}

public void setQuestionId() {
    return questionId;
}

public void setQuestionId(int questionId) {
    return answerContent;
}

public string
getAnswerContent() {
    return ischanswerContent;
}

public void setQuestionId(int questionId);

return answerContent;
}

public string
getAnswerContent =
answerContent;
}

public void setScorrect() {
    return isCorrect;
}

public void setScorrect() {
    return answerScre() {
    re
```

```
private String userName;
private String userName;
private int question(a)
private int guestionContent;
private int group questionContent;
private int isCorrect;
public string gestion and incomplete interest in the string gestion and incomplete interest interest interest incomplete interest interes
```

```
private boolean isShow;
private String examId;
private String examId;
private String score;
private Isting score;
private Isting score;
private Isting score;
private Isting score;
}
public void setShow(boolean show) {
    isShow = show;
}

public void setExamId() {
    return examId;
}

public String getExamId(String examId) {
    return examId;
}

public String getUserName() {
    return userName;
}

public void setUserName(String userName) {
    return score;
}

public String getScore() {
    return score;
}

public String getScore(String score) {
    return score;
}

public String getExamDate() {
    return examDate;
}

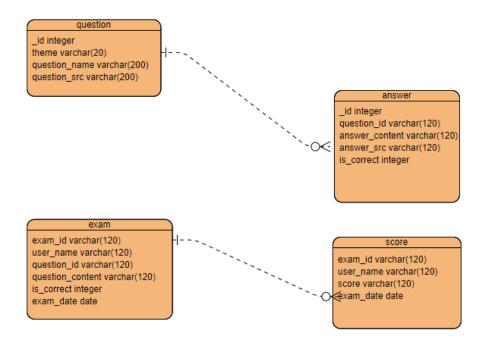
public void setExamDate() {
    return examDate;
}

public List<Exam>
getExamIst() {
    return examList,
}

public void
setExamList(List<Exam> examList;
this.examList = examList;
}
```

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.