

Java for Smartphone Development

Assignment #2: Class Diagrams
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ReadMe

1. Create Input file with Student Index and 5 Quiz Integers
2. Specify location of text input in the Main.java file
3. Run Main Class

Input Data & Output

Input.data

Stud Qu1 Qu2 Qu3 Qu4 Qu5

1234 052 007 100 078 034

2134 090 036 090 077 030

3124 100 045 020 090 070

4532 011 017 081 032 077

5678 020 012 045 078 034

6134 034 080 055 078 045

7874 060 100 056 078 078

8026 070 010 066 078 056

9893 034 009 077 078 020

1947 045 040 088 078 055

2877 055 050 099 078 080

3189 022 070 100 078 077

4602 089 050 091 078 060

5405 011 011 000 078 010

6999 000 098 089 078 020

Output

```
Run: Main Main
/Library/Java/JavaVirtualMachines/jdk1.8.0_45.jdk/Contents/Home/bin/java ...
Stud Qu1 Qu2 Qu3 Qu4 Qu5
-----
1234 052 007 100 078 034
2134 090 036 090 077 030
3124 100 045 020 090 070
4532 011 017 081 032 077
5678 020 012 045 078 034
6134 034 080 055 078 045
7874 060 100 056 078 078
8026 070 010 066 078 056
9893 034 009 077 078 020
1947 045 040 088 078 055
2877 055 050 099 078 080
3189 022 070 100 078 077
4602 089 050 091 078 060
5405 011 011 000 078 010
6999 000 098 089 078 020

Stud   Q1  Q2  Q3  Q4  Q5
0      52  7   100 78  34
0      90  36  90  77  30
0     100 45  20  90  70
0      11 17  81  32  77
0      20 12  45  78  34
0      34 80  55  78  45
0      60 100 56  78  78
0      70 10  66  78  56
0      34 9   77  78  20
0      45 40  88  78  55
0      55 50  99  78  80
0      22 70  100 78  77
0      89 50  91  78  60
0      11 11  0   78  10
0      0   98 89  78  20

Low Score:    0 7 0 32 10
High Score:   100 100 100 90 80
Average Score: 46.2 42.3 70.5 75.7 49.7
```

Student

Student.java

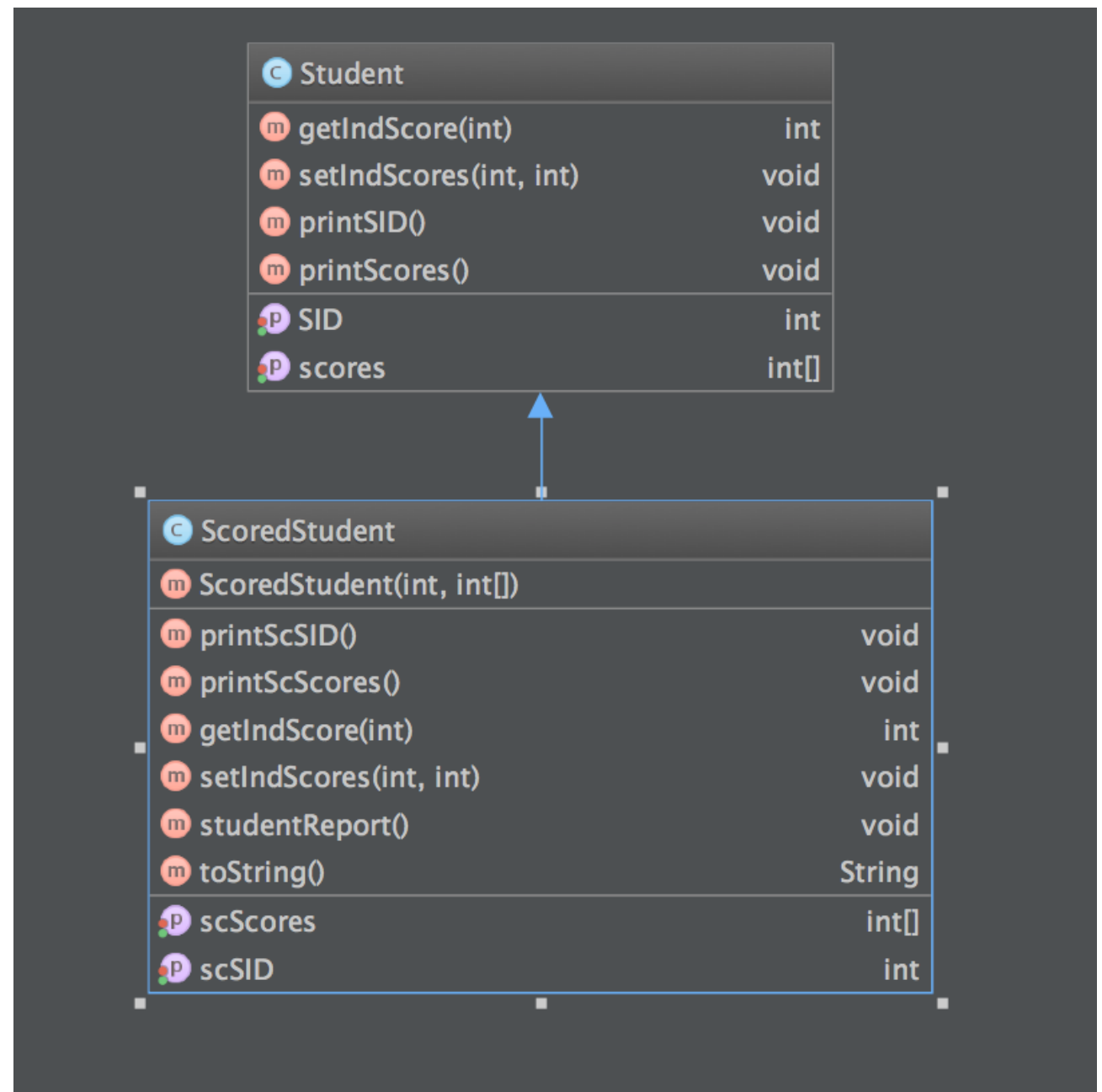
- private int SID;
- private int scores[] = new int[5];
- public int getSID();
- public void setSID();
- public int[] getScores();
- public void setScores(int[] scores);
- public int getIndScores(int position);
- public void setIndScores(int score, int position);
- public void setScores(int[] scores);
- public void printSID();
- public void printScores();

c Student	
f SID	int
f scores	int[]
m getSID()	int
m setSID(int)	void
m getScores()	int[]
m getIndScore(int)	int
m setIndScores(int, int)	void
m setScores(int[])	void
m printSID()	void
m printScores()	void

ScoredStudent

ScoredStudent.java extends Student

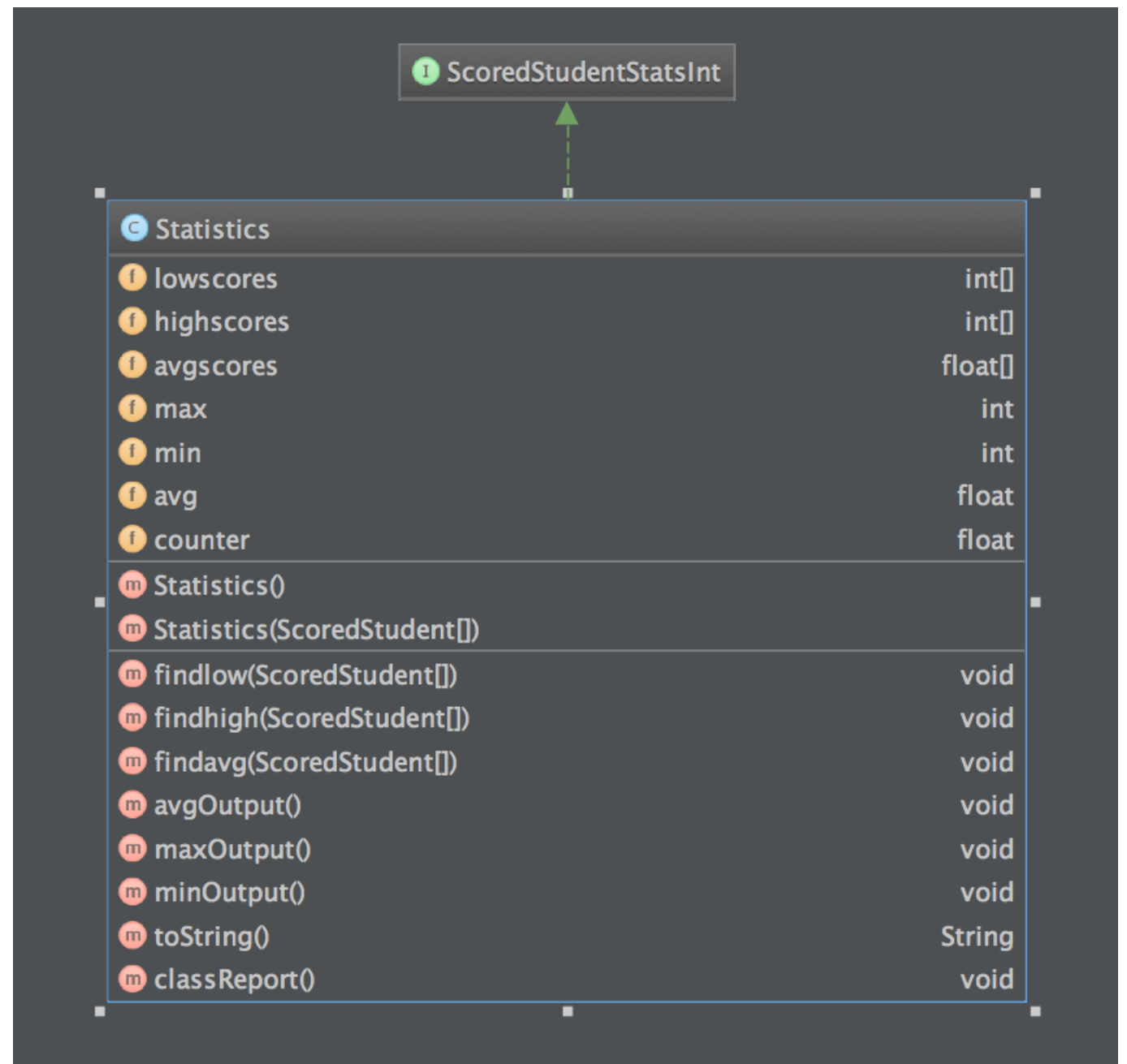
- package com.Util;
- import java.util.Arrays;
- public ScoredStudent(int scSID, int[] scScores)
- private int scSID;
- private int scScores[] = new int[5];
- public int getScSID();
- public void setScSID();
- public int[] getScScores();
- public void setScScores(int[] scores);
- public int getIndScores(int position);
- public void setIndScores(int score, int position);
- public void setScores(int[] scores);
- public void printScSID();
- public void printScScores();
- public void studentReport();
- public String toString();



Statistics

Statistics.java (implements ScoredStudentStatInt)

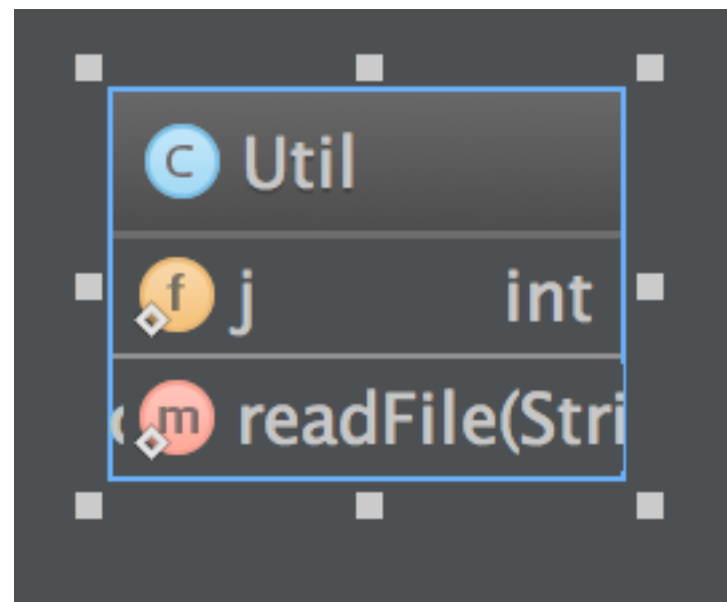
- private int[] lowscores = new int[5];
- private int[] highscores = new int[5];
- private int[] avgscores = new int[5];
- public Statistics();
- public Statistics(ScoredStudent[] student)
- public void findLow(ScoredStudent[] student);
- public void findHigh(ScoredStudent[] student);
- public void findAvg(ScoredStudent[] student);
- private int max = 0;
- private int min = 0;
- private float avg = 0;
- private float counter = 0;
- public void avgOutput();
- public void minOutput();
- public void maxOutput();
- public void classReport()



Util

Util.java

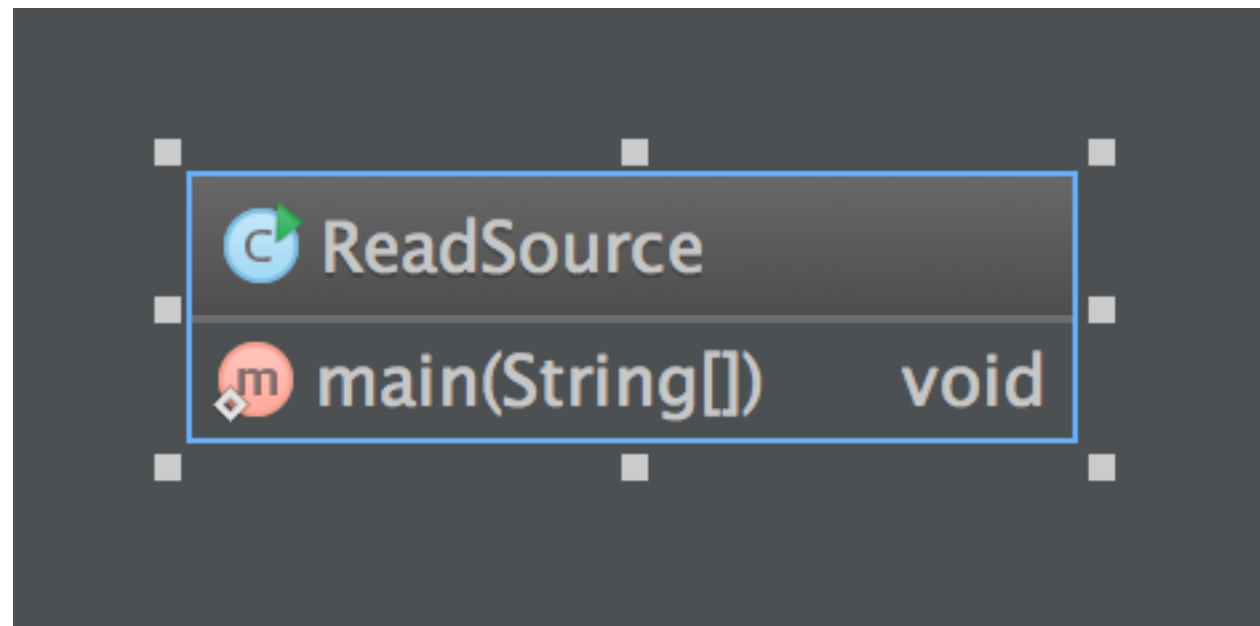
- `private static int j = 0;`
- `public static ScoredStudent [] readFile(String filename, ScoredStudent [] stu) throws StudentException, QuizException;`



ReadSource

ReadSource.java

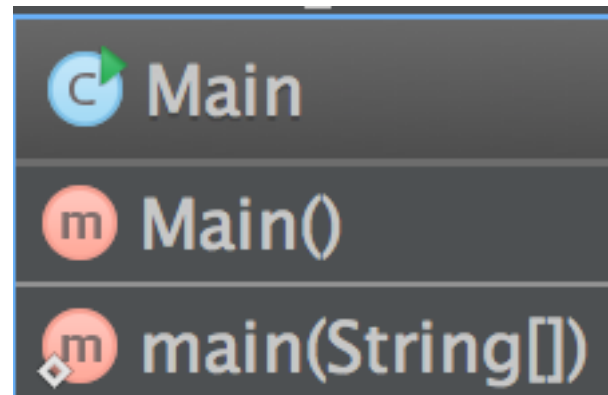
- package com.Util;
- import java.io.BufferedReader;
- import java.io.FileReader;
- import java.io.IOException;
- public class ReadSource{}
- public static void main(String [] arguments){};



Main

Main.java

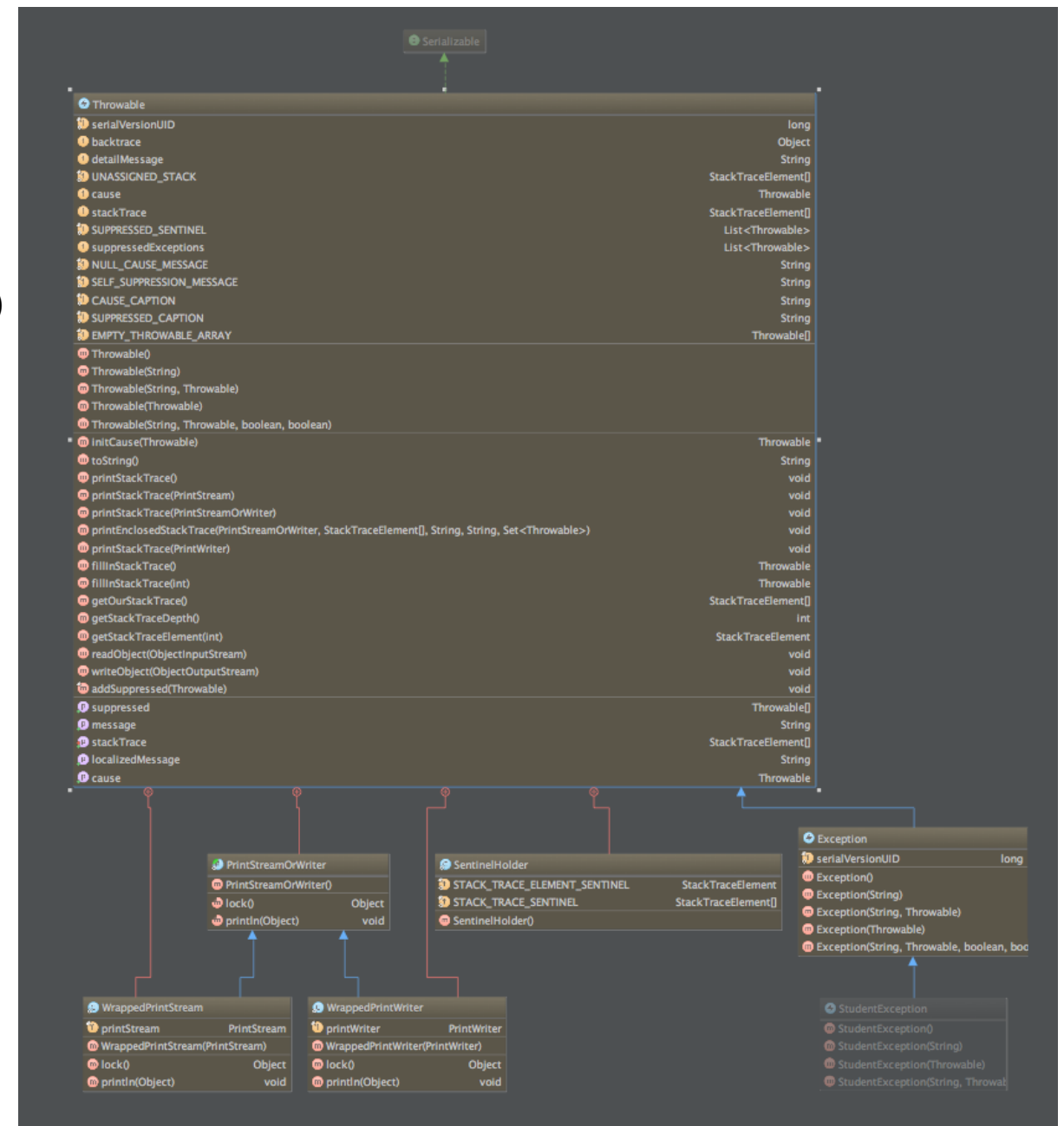
- `package com.Util;`
- `public Main();`
- `public static void main(String[] arguments){};`



StudentException

StudentException.java extends Exception

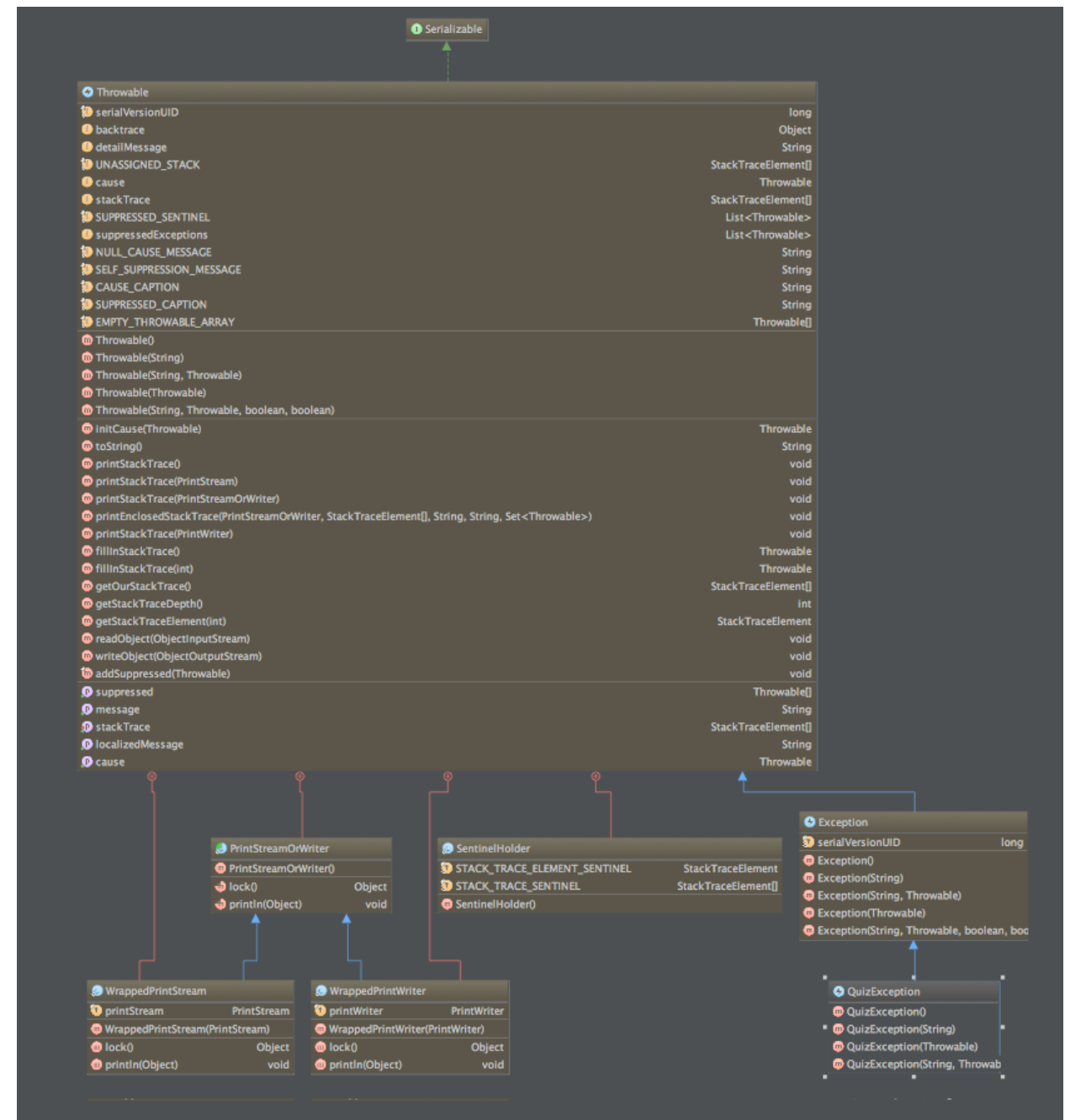
- package com.Util;
- public class StudentException extends Exception;
- public StudentException();
- public StudentException(String message)
- public StudentException(Throwable throwable)
- public StudentException(String message, Throwable throwable)



QuizException

QuizException.java extends Exception

- package com.Util;
- public class QuizException extends Exception;
- public QuizException();
- public QuizException(String message)
- public QuizException(Throwable throwable)
- public QuizException(String message, Throwable throwable)



Diagram

