**TASK-3.0**

Please read the source code below and try to understand what it does.

**public** **final** **void** translate(CharSequence input, Writer out) **throws** IOException {

**if** (out == **null**) {

**throw** **new** IllegalArgumentException("The Writer must not be null");

}

**if** (input == **null**) {

**return**;

}

**int** pos = 0;

**int** len = input.length();

**while** (pos < len) {

**int** consumed = translate(input, pos, out);

**if** (consumed == 0) {

**char**[] c = Character.*toChars*(Character.*codePointAt*(input, pos));

out.write(c);

pos+= c.length;

**continue**;

}

**for** (**int** pt = 0; pt < consumed; pt++) {

pos += Character.*charCount*(Character.*codePointAt*(input, pos));

}

}

}

**Q.3.0. How well do you think you understand the code?**

* Well
* Not so well

**TASK-3.1**

However, this same code is failing.

**Failure Message:**

java.lang.StringIndexOutOfBoundsException: String index out of range:2

**Test:**

assertEquals(\"\uD83D\uDE30\", StringEscapeUtils.escapeCsv(\"\uD83D\uDE30\"));

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We will ask you to inpect **two different** locations in the **same code**.

**Q.3.1. Do you think that something in the highlighed code causes the failure?**

* Yes
* No

**public** **final** **void** translate(CharSequence input, Writer out) **throws** IOException {

**if** (out == **null**) {

**throw** **new** IllegalArgumentException("The Writer must not be null");

}

**if** (input == **null**) {

**return**;

}

**int** pos = 0;

**int** len = input.length();

**while** (pos < len) {

**int** consumed = translate(input, pos, out);

**if** (consumed == 0) {

**char**[] c = Character.*toChars*(Character.*codePointAt*(input, pos));

out.write(c);

pos+= c.length;

**continue**;

}

**for** (**int** pt = 0; pt < consumed; pt++) {

pos += Character.*charCount*(Character.*codePointAt*(input, pos));

}

}

}

**Q.3.2. How confident are you that your answer is correct?**

* Confident
* Not so confident

**TASK-3.2**

**Failure Message:**

java.lang.StringIndexOutOfBoundsException: String index out of range:2

**Test:**

assertEquals(\"\uD83D\uDE30\", StringEscapeUtils.escapeCsv(\"\uD83D\uDE30\"));

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**Q.3.3. Do you think that something in the highlighed code causes the failure?**

* Yes
* No

**public** **final** **void** translate(CharSequence input, Writer out) **throws** IOException {

**if** (out == **null**) {

**throw** **new** IllegalArgumentException("The Writer must not be null");

}

**if** (input == **null**) {

**return**;

}

**int** pos = 0;

**int** len = input.length();

**while** (pos < len) {

**int** consumed = translate(input, pos, out);

**if** (consumed == 0) {

**char**[] c = Character.*toChars*(Character.*codePointAt*(input, pos));

out.write(c);

pos+= c.length;

**continue**;

}

**for** (**int** pt = 0; pt < consumed; pt++) {

pos += Character.*charCount*(Character.*codePointAt*(input, pos));

}

}

}

**Q.3.4. How confident are you that your answer is correct?**

* Confident
* Not so confident