Category-Partition Steps

- ITFs (Independently Testable Features)
- Parameters, environment
- Partitions
- Constraints
- Value classes
- Test specification

ITFs

- That we get the string correctly broken into fragments

Parameters and environment

- Parameters:
  - regex
  - limit
  - s, the string we're splitting
- Environment:
  - JRE

Partitions

- s:
  - Empty "" [don't need to think about s null here, because it's the instance the method is invoked on, not a parameter: can't invoke a method on a null]
  - Doesn't contain regex
  - Contains regex many times
  - Contains regex once
  - Equals regex
  - Regex at beginning/middle/end

Partitions

- regex:
  - Empty
  - Bigger than s
  - Null
  - nonempty

Partitions

- limit:
  - Negative
  - Zero
  - Positive:
    - < occurrences of regex
    - =
    - >
- JRE:
  - Before 1.4 or afterwards

Constraints

- At the moment, 6 x 4 x 5 x 2 = 240 combinations

- Errors: null regex, JRE < 1.4

  - 2 error tests + 6 x 3 x 5 x 1 = 92

- One-offs: regex empty, limit -ve, regex bigger than s, s empty, s = regex, s doesn't contain regex

  - 2 error tests + 6 one-offs + 3 x 1 x 4 x 1 = 20

Ambiguity

- Spec doesn't say what to do with regex = "" (empty).
  - Assumption: breaks s up at every character: "cat" → "c", "a", "t"
- Nor what to do when regex is null...
  - Assumption: NullPointerException

Value classes

- s:
  - Contains regex many times
  - Contains regex once
  - Regex at beginning/middle/end
- "abcabcabc"

Value classes

- regex:
  - Nonempty

- "abc", "abcdef", "c", "abcabcabc", "cabca"

Value classes

- limit:
  - Zero
  - Positive:
    - < occurrences of regex
    - =
    - >
  - -1, 0, 1, 3, 5
- JRE:
  - After 1.4

Test specification

- Env, params, expected result!!!

- Error tests:

    1) [JRE 1.4] "abcabcabc".split(null, 3) → error?

        · Null regex

    2) [JRE 1.3] "abcabcabc".split("abc", 1) → probably won't compile/run time error

        · Split not defined in JRE prior to 1.4

Test specification: one-off tests

3) [JRE 1.4] "abcabcabc".split("", 3) → {"a", "b", "cabcabc"}

· Regex empty

4) [JRE 1.4] "abcabcabc".split("abc", -1) → {"", "", "", ""}

· limit = 0

5) ...

Test specification: combinations

- Remaining combinations are:

  - (many | once | beg-mid-end) x (0, <, =, >)

8) [JRE 1.4] "abcabcabc".split("c", 0) → {"ab", "ab", "ab"}

  - many x 0

9) ...