CS445 / SE463 / ECE 451 / CS645
Software requirements specification
& analysis

Where to Find Exceptions

Fall 2024

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Where to Find Exceptions

Some advice on where to find exceptions

Use WhenIsGood as the basis for examples

For each input to any use case:

- function domain errors
- any other input errors?
- domain assumptions

Function Domain Errors

Each input is supposed to be a value of some specific type.

When the input is not of that type, you have an exception that needs to be detected and responded to.

Function domain error is different from a domain assumption that does not hold.

Function Domain Errors

Date

- month not 1-12
- day not 1-31, better yet, month specific check
- year not this or next year

Function Domain Errors

Day of week

- not 1-7, 0-6, one of {Sun – Sat}

Function Domain Errors

Time

- hour not 1 – 12 or 0 – 23, depending on am-pm|24

- minute not 0 – 59

- second not 0 – 59

Function Domain Errors

URL

- not Unicode

Function Domain Errors

Duration

- not positive
- not negative

Function Domain Errors

E-mail

- not ASCII

Function Domain Errors

With EACH, you must decide

- if testable
- if worth enforcing
- response

Function Domain Errors

With EACH, you must determine if an error or just a reasonableness question:

- "Are you sure that the duration is 600 minutes?"

- "Are you sure that the duration is 6 minutes?"

Function Domain Errors

In some cases, you can make it impossible to input wrong values by offering specific choices, e.g., a list of checkable days of the week, calendars with clickable dates, etc.

You can even make a whole input be something on the screen that the user points to or drags over, e.g., an attendee's name or an attendee's calendar.

Any other input errors?

Any other input errors?

- random input

- missing input, e.g., missing duration; could always provide a default

Such errors are not always clear, e.g., in free-text input.

Domain Assumptions

Domain Assumptions

- That a domain assumption does not hold

E.g.:

- Convenor has not set er available hours before creating event.

Domain Assumptions

With EACH, you must decide

- if testable

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