Exercise walk-through

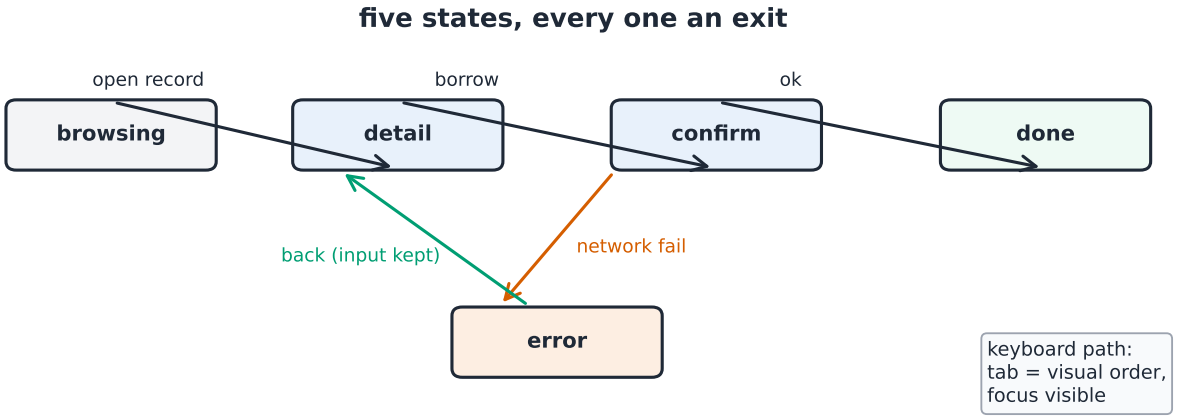
12.3
HCI and accessibility

University Computer Science

HCI: states with exits, contrast with numbers

1. **States** Browsing, detail, confirm, done, error - the error state keeps the input and returns to detail.
2. **Contrast** Body text 7:1 passes WCAG AA; the grey disabled at 2.9:1 fails - replaced 4.6:1 with an underline.
3. **Keyboard** Tab order = visual order, focus visible, enter confirms - hover-only menus fail this path.

Interface states



contrast: body 7:1 passes; grey disabled 2.9:1 fails -> replaced 4.6:1 + underline

placeholder is not a label; error state keeps the input

Five **states** and **transitions**; the error state always exits.

Exercises 2.1·2.3

2.1 From which state is error reachable, and where does it return? [3]

2.2 State the WCAG text-contrast threshold. [3]

2.3 Why is placeholder-as-label a defect? [3]

Exercises 2.1·2.3

2.1 From which state is error reachable, and where does it return? [3]

2.1

- From confirm; returns to detail with the input kept ✓.

2.2 State the WCAG text-contrast threshold. [3]

2.2

- At least 4.5:1 for body text (AA) ✓.

2.3 Why is placeholder-as-label a defect? [3]

2.3

- It disappears on input – no permanent label; screen readers may skip it ✓.

Exercise 3.1

3.1 The team adds a renewal screen with states: detail, renew confirm, renewed, error.

List the transitions needed so every state has an exit. State what the error state must preserve and offer. Give the keyboard path in order (which keys, which controls). State the focus requirement on each control. [8]

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3.1

- Transitions: detail → renew confirm; renew confirm → renewed; renew confirm → error; error → detail; renewed → detail ✓.
- Error preserves the member's form input and offers retry and back ✓.
- Keyboard path: tab through record fields in visual order, tab to the renew button, enter to confirm, enter on the confirmation ✓.
- Focus: visible on every control, in visual order, and the confirm state announces the new due date ✓.

Exercise 3.2

3.2 An audit finds: body 7:1, secondary text 3.8:1, disabled button 2.9:1, focus ring invisible on the confirm button.

Classify each against WCAG (pass/fail, and the threshold). Give the repair for each failure. State the general principle the audit illustrates. [7]

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3.2

- Body 7:1: passes (threshold 4.5:1) ✓.
- Secondary 3.8:1: fails for body-size text – repair to $\geq$ 4.5:1 (darker ink or larger size rule) ✓.
- Disabled 2.9:1: fails – repair to 4.6:1 with an underline or icon affordance (as the course did) ✓.
- Invisible focus: fails operability – repair with a visible focus ring on every control ✓.
- Principle: accessibility is measurable – thresholds, keyboard paths, focus – measure them like performance ✓. ()