HCI FUNDAMENTALS 2026

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Heuristic Evaluation: Exercise

HCI Fundamentals

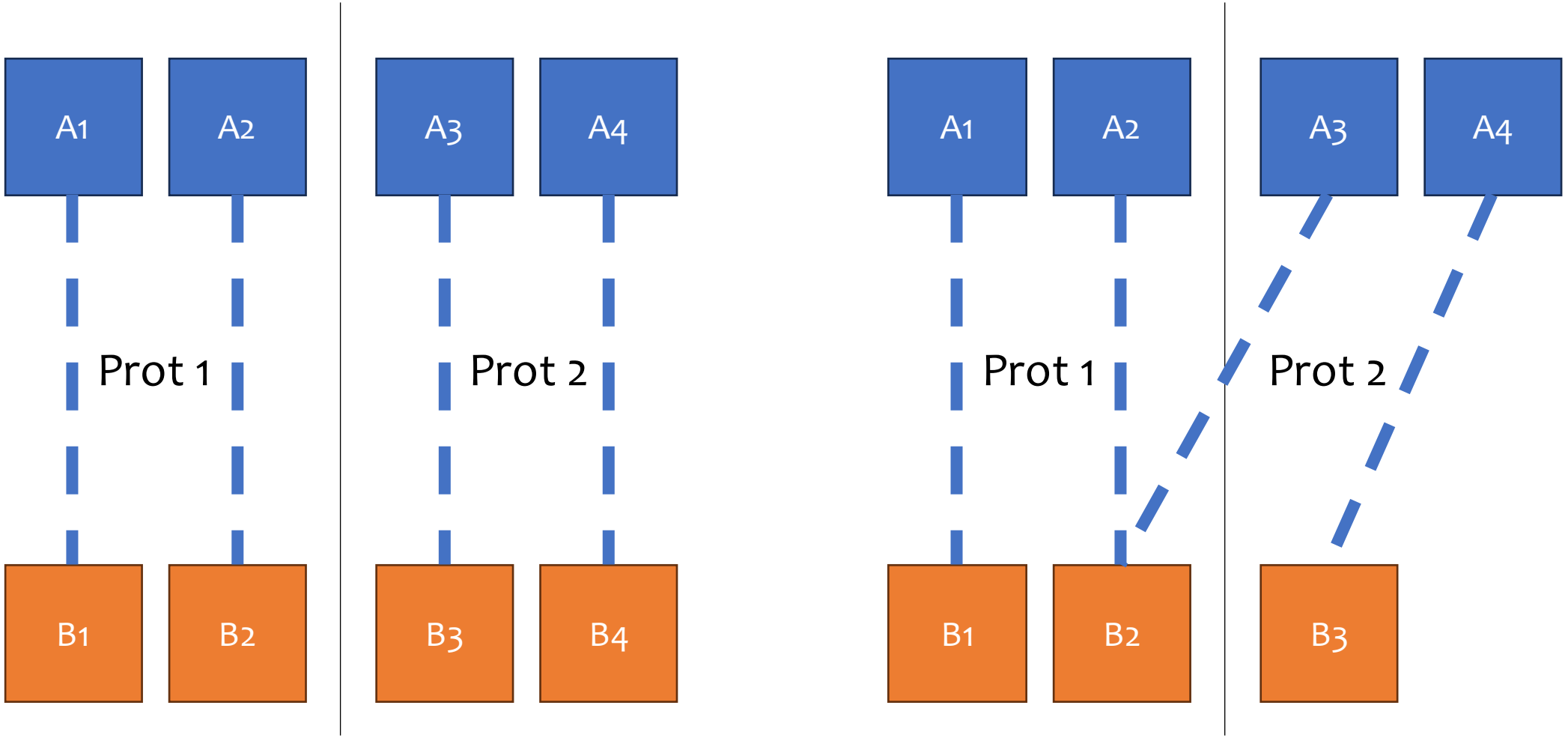
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Academic Year 2026/2027

Administrativia

- **Assignment 3** is out
  - Due: November 26 EoD
  - Individual assignment!
- Last two weeks and it cannot be changed after the deadline
  - It will be evaluated as you submit it

Administrativia: Evaluators, Prototypes, Teams



Goal

- Conduct two individual heuristic evaluations on a real interface
- Share results with the class and reach an agreement

Recap: Phases of Heuristic Evaluation

1. Pre-evaluation training
   - Give evaluator information about the domain and the scenario to be evaluated
2. Evaluation
   - Individual
3. Severity Rating
   - First, individually
   - Then, aggregate and find consensus
4. Debriefing
   - Review with the design team

Recap: Evaluation (I)

- Define a set of tasks, that the evaluators should analyze
- For each task, the evaluator should step through the design several times, and inspect the UI elements
  - On the real design, or on a preliminary prototype
- At each step, check the design according to each of the heuristics
  - 1st step, get a general feeling for the interaction flow and general scope
  - 2nd step (and following), focus on specific UI elements, knowing where they fit in the general picture

Recap: Evaluation (II)

- Where problems may be found
  - A single location in the UI
  - Two or more locations that need to be compared
  - Problem with the overall UI structure
  - Something is missing
    - May be due to prototype approximation
    - May still be unimplemented

Exercise: Heuristic Evaluation of Real Interfaces

- Target website: https://trenitalia.com/
  - Trenitalia is the primary train operator in Italy
  - It offers national rail transport with regional trains and high-speed trains ("Frecciarossa")
- Useful tasks to spot several problems:
  - Explore the offers proposed by the website and buy a discounted ticket
  - Buy a "Frecciarossa" round trip from Turin to Rome for the winter holidays
  - Chat with an operator for receiveing support
- In performing the tasks, you can register/login to the platform and change the language of the website, if you want

Template

[Issue #]. [Heuristic #] [Heuristic Title]

- *Where: [Where the issue occurred – task, step, page]*
- *What: [Description of the problem]*
- *Why: [Reason why it violates the heuristic]*
- *Severity: [0-4, according to Nielsen's severity rating]*

1. H4 Consistency and standards

- *Where: Specify your language.*
- *What: The app uses "Save" for saving information, except here where it uses "Store".*
- *Why: It is an inconsistent terminology for the same function in the application, which can create confusion.*
- *Severity: 3*

Exercise – Violations (among many others!)

1. H1 Visibility of system status

- Where: navbar logo
- What: if I click on the logo in the navbar when I'm logged in, I'm redirected to another website and I'm automatically logged out from the system without any feedback
- Why: the user is automatically logged out from the system without any explanation nor feedback, so she might think she is still logged in.
- Severity: 3

Exercise – Violations (among many others!)

2. H2 Match between system and the real world

- Where: “offers” dropdown when the language is English
- What: the menu is using Italian words even if the language is set to English
- Why: the interface does not match the user’s language.
- Severity: 1



Exercise – Violations (among many others!)

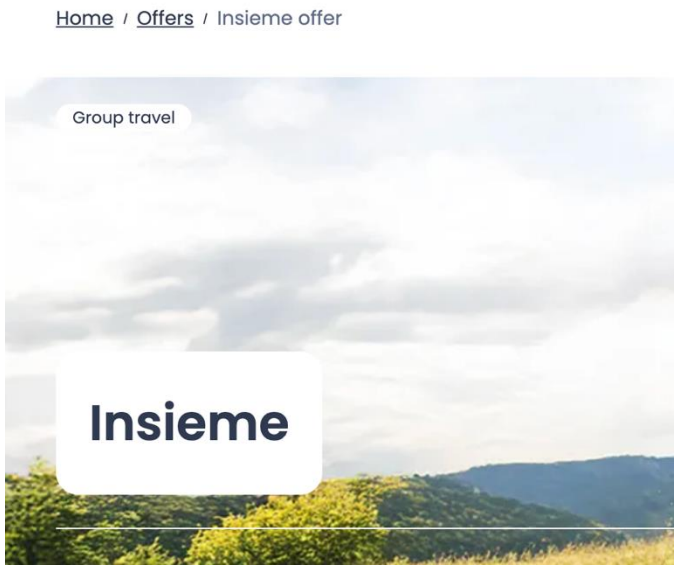
3. H3 User control and freedom

- Where: search procedure
- What: If the user starts searching as a “guest” and then wants to log-in, she is redirected to another page
- Why: the user is not in control, as she would probably like to continue the search and eventually buy the tickets
- Severity: 2

Exercise – Violations (among many others!)

4. H3 User control and freedom

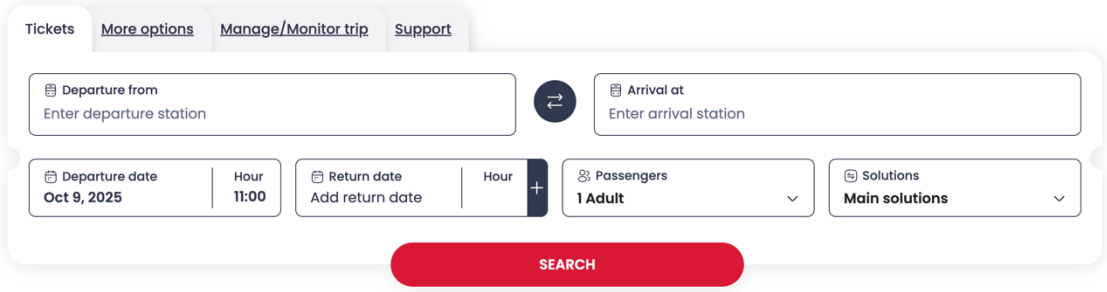
- Where: breadcrumb menus
- What: the breadcrumb menus do not reflect the interaction history of the user
- Why: the breadcrumb menus allow the user to navigate to pages she has never seen before (e.g., the "Offers" page), creating confusion as breadcrumb menus are typically not used in this way
- Severity: 2

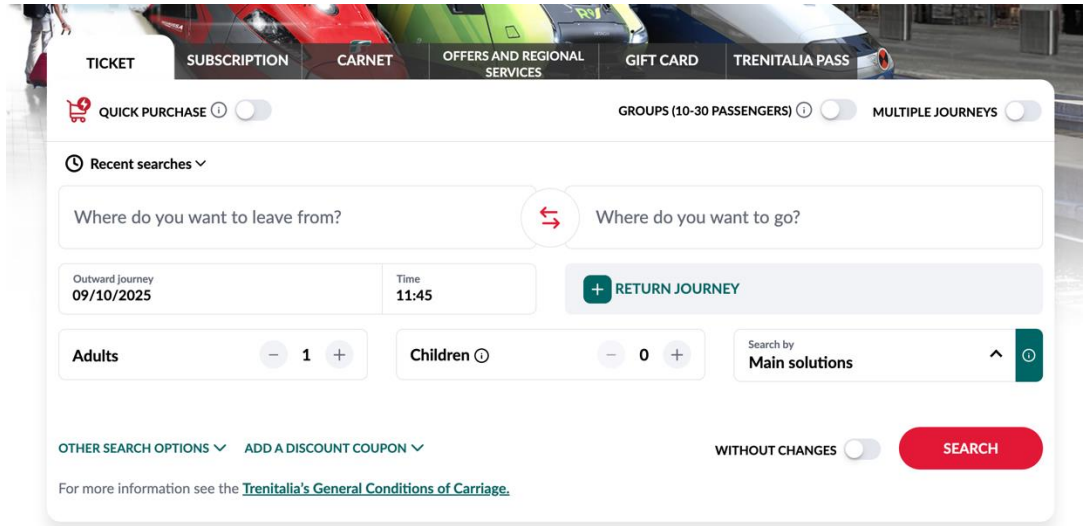


Exercise – Violations (among many others!)

5. H4 Consistency and standards

- Where: search form
- What: the website is showing two different search forms depending on whether the user is logged in into the system or not
- Why: users may be confused in using two different forms for the same task
- Severity: 2

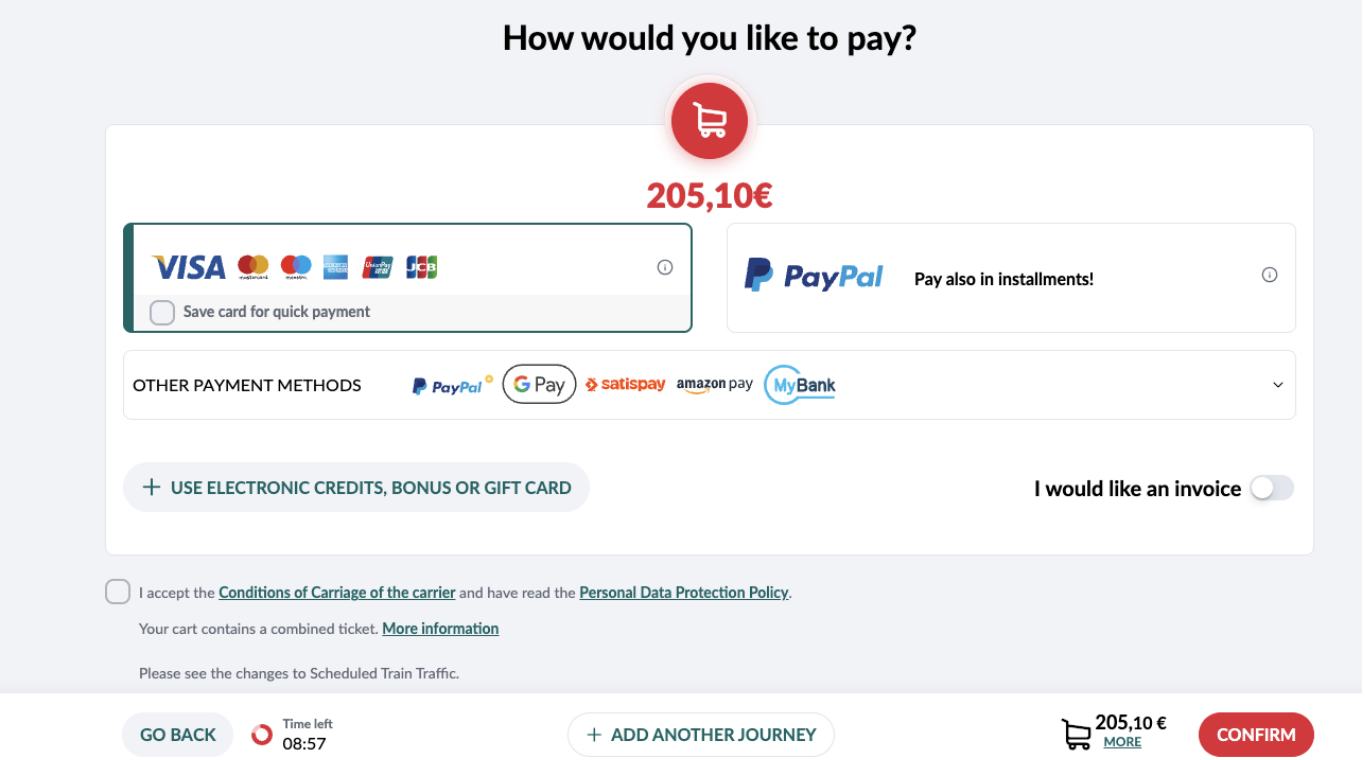




Exercise – Violations (among many others!)

6. H6 Recognition than recall

- Where: payment form
- What: In the payment form, there is no clear indication of the trains I've selected (I need to click on the shopping cart icon to see an overview).
- Why: the user must remember the details of the selected train
- Severity: 2



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