

# Heuristic Evaluation: Exercises

**Human Computer Interaction**

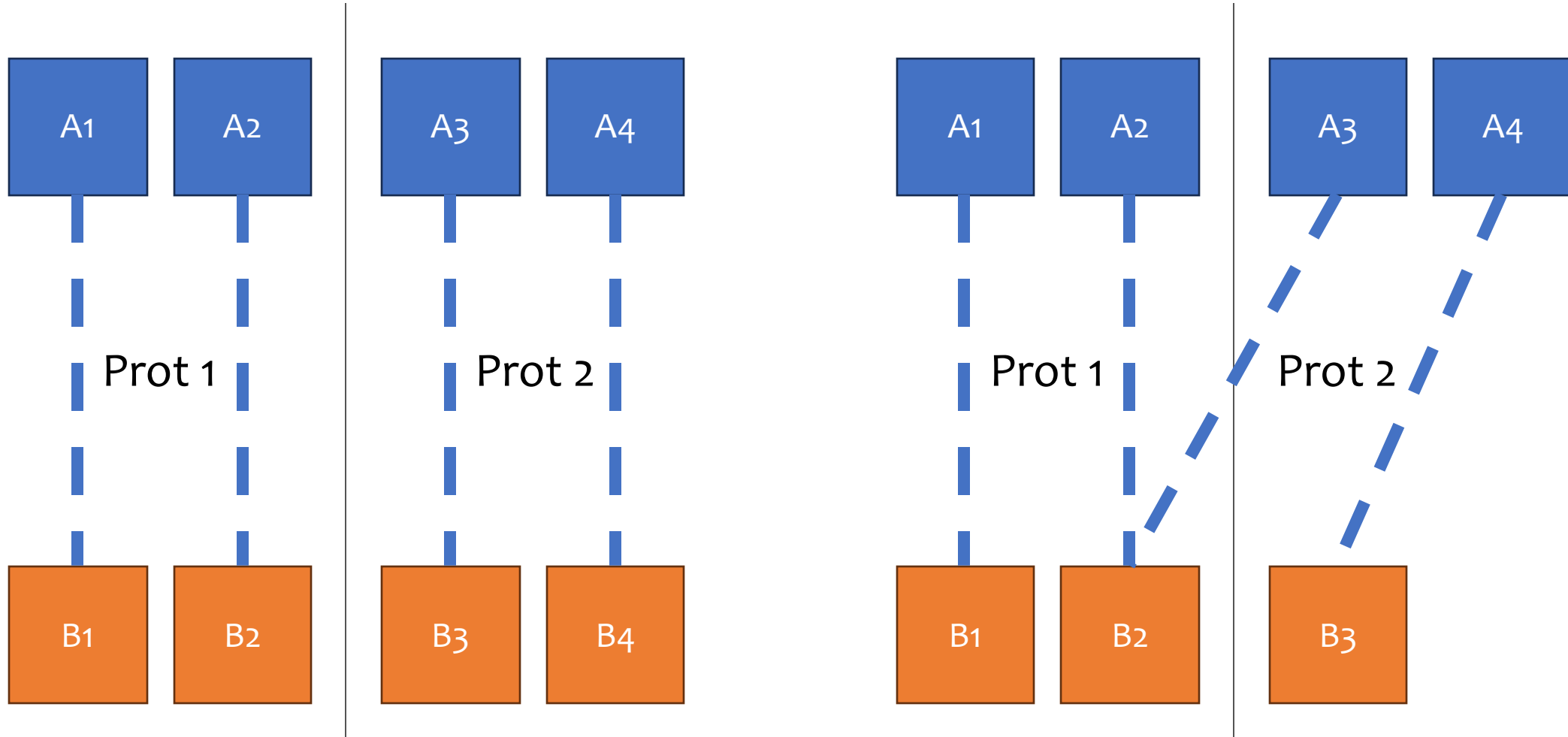
Luigi De Russis, Alberto Monge Roffarello

Academic Year 2025/2026

# Administrativa

- **Assignment 3** is out
  - Due: November 25 EoD
  - Individual assignment!
- Last two weeks and it cannot be changed after the deadline
  - It will be evaluated as you submit it

# Administrativa: Evaluators, Prototypes, Teams



# Goal

- Conduct two individual heuristic evaluations on a) a real interface and b) a low-fi prototype from the 2022 edition of the course
- 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
  - 1<sup>st</sup> step, get a general feeling for the interaction flow and general scope
  - 2<sup>nd</sup> 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 1: 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 receiving 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 1 – 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 1 – 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

### – SPECIAL OFFERS

[Insieme](#)

[Me&You](#)

[Bimbi Gratis](#)

[FrecciaYOUNG](#)

[FrecciaSENIOR](#)

[FrecciaFAMILY](#)

[FrecciaFRIENDS](#)

[Family Night](#)

[Young](#)

[Senior](#)

# Exercise 1 – Violations (among many others!)

## 3. H3 User control and freedom

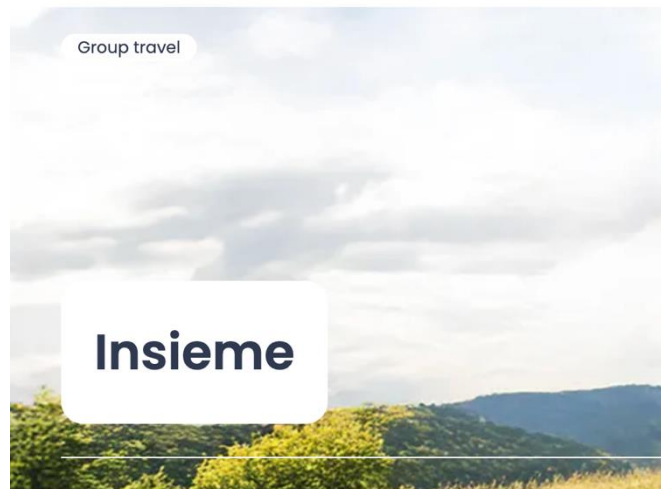
- Where: search procedure
- What: If the user starts searching as a “guest” and then wants to log-in, she is redirected to another page
- Why: the user is not in control, as she would probably like to continue the search and eventually buy the tickets
- Severity: 2

# Exercise 1 – 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

[Home](#) / [Offers](#) / Insieme offer



# Exercise 1 – 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

This screenshot shows the search form for users who are not logged in. The form is located at the bottom of the page and includes the following elements:

- Navigation links: Tickets, More options, Manage/Monitor trip, Support.
- Departure from: A text input field with a placeholder "Enter departure station".
- Arrival at: A text input field with a placeholder "Enter arrival station".
- Departure date: A date picker showing "Oct 9, 2025".
- Hour: A time picker showing "11:00".
- Return date: A date picker with a placeholder "Add return date".
- Hour: A time picker with a placeholder "Add return date".
- Passengers: A dropdown menu showing "1 Adult".
- Solutions: A dropdown menu showing "Main solutions".
- A large red "SEARCH" button.

This screenshot shows the search form for users who are logged in. The form is located at the top of the page and includes the following elements:

- Navigation links: TICKET, SUBSCRIPTION, CARNET, OFFERS AND REGIONAL SERVICES, GIFT CARD, TRENITALIA PASS.
- QUICK PURCHASE: A toggle switch.
- GROUPS (10-30 PASSENGERS): A toggle switch.
- MULTIPLE JOURNEYS: A toggle switch.
- Recent searches: A dropdown menu.
- Where do you want to leave from?: A text input field.
- Where do you want to go?: A text input field.
- Outward journey: A date picker showing "09/10/2025".
- Time: A time picker showing "11:45".
- + RETURN JOURNEY: A button.
- Adults: A counter showing "1".
- Children: A counter showing "0".
- Search by: A dropdown menu showing "Main solutions".
- OTHER SEARCH OPTIONS: A dropdown menu.
- ADD A DISCOUNT COUPON: A dropdown menu.
- WITHOUT CHANGES: A toggle switch.
- SEARCH: A red button.
- For more information see the [Trenitalia's General Conditions of Carriage](#).

# Exercise 1 – Violations (among many others!)

## 6. H6 Recognition than recall

- Where: search form
- What: when a user select a train and proceed in the form, there is no indication of the selected train
- Why: the user must remember the details of the selected train
- Severity: 3

The screenshot displays a train booking interface. At the top, a dark green bar contains the text "BUYER'S CONTACT DETAILS" and "Alberto Monge Roffarello • albertomonge91@gmail.com • 3488282758". Below this, the "Passengers" section features a yellow warning box stating "Tickets are non-transferable. Please also provide your email and/or phone number in case we need to contact you". The main form area includes a dropdown menu for the buyer's name, "ALBERTO MONGE ROFFARELLO", and a grid of input fields for "Name\*", "Surname\*", "Date of birth", "Contact number", "Email", and "CartaFRECCIA/X-GO". Each field contains the user's information and a clear (X) button. A "Mandatory data" note is present. A button labeled "+ ENTER DISCOUNT COUPON" is located at the bottom right of the form. Below the form, the text "Need anything else for your trip?" is displayed. At the very bottom, there are three buttons: "GO BACK", "+ ADD ANOTHER JOURNEY", and "CONFIRM". A shopping cart icon with "70,90 € MORE" and a "Time left 09:21" indicator are also visible.

BUYER'S CONTACT DETAILS  
Alberto Monge Roffarello • albertomonge91@gmail.com • 3488282758

Passengers

⚠ Tickets are non-transferable. Please also provide your email and/or phone number in case we need to contact you

EMPTY ALL FIELDS

AM ALBERTO MONGE ROFFARELLO  
Buyer

Name\* ALBERTO X Surname\* MONGE ROFFARELLO X Date of birth 27/05/1991 X

Contact number 3488282758 X Email ALBERTOMONGE91@GMAIL.COM X CartaFRECCIA/X-GO 148115165 +70,9 pts X

\* Mandatory data

+ ENTER DISCOUNT COUPON

Need anything else for your trip?

GO BACK Time left 09:21 + ADD ANOTHER JOURNEY 70,90 € MORE CONFIRM

# Exercise 2: Heuristic Evaluation of Low-Fi Prototypes

- Target prototype: **RealDeal**
  - Flow diagram: <https://polito-hci-2023.github.io/materials/slides/07b-exercise/realdeal-prototype.jpg>
  - **BEWARE: pre-feedback!**
  - **DO NOT** use it as an example of good prototype!
- Goal: to encourage people to meet each other in person by giving them some offers and discounts on places as «prizes»
- Tasks:
  1. Finding someone with common interests
  2. Getting a discount for a given place
  3. Adding a discount for your business



## Exercise 2

- Select 1 task and try to perform it following the flow diagram
  - Keep the list of heuristics in front of you while performing the task and take notes
  - If you find usability problems (you will!), specify which heuristic(s) each problem you found is related to
  - Add a rating for each identified problem by applying Nielsen's severity ratings: 0 = not a problem, 1 = cosmetic, 2 = minor, 3 = major, 4 = usability catastrophe
  - Use the [provided template](#) as a guide for conducting the evaluation and taking notes

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