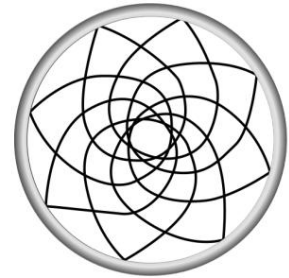


Relation



project Web Technologies: longing



Index

Correction information	2
Group members	2
Web address	2
Account	2
Abstract	2
Requirements Analysis	2
Group organization	3
Design phase	3
Construction phase	5
Homepage	5
Dreams	5
Reservation	6
User side booking	7
Admin and User Dashboard	7
Admin side:	7
User Side:	8
Adding new dreams	8
Accessibility and usability	9
Security	11
User navigation help Motivation for	11
implementation choices and critical parts of the project Final notes and future	12
implementations.	13

Correction information

Group members

- Picello Davide 2034825 (davide.picello@sutdenti.unipd.it)
- Mahdi Mouad 2044222 -
- Di Pietro Gabriele 2010000 -
- Crude Helium 2012831

Web address

Web address of the project home page:

<http://tecweb.studenti.math.unipd.it/dpicello/src/php/index.php>

Account

As requested, the default accounts are present:

- Admin account (name / password): admin / admin
- User account (name / password): user / user

There are also other accounts, used to populate the site with purchases and reviews (the password is the username itself): ***mario_rossi, luigi_verdi, giulia_bianchi, anna_neri, marco_gialli.***

Abstract

Saudade is a website created for a fictional company that allows you to purchase “dreams” as if they were movies or TV series, to be used with the neural chip created by the company. In addition to dreams, it is possible to book an appointment to implant the chip, the style of the site is a mix between a classic e-commerce and a review site, such as 'rottentomatoes.com', where you can leave and consult reviews on a particular film.

Requirements Analysis

The site, therefore, presents itself as a sort of e-commerce with, in addition, pages containing information about the company. Not being a multimedia content site, no priority was given to the development for a specific device, the main purpose of the site is to sell products (dreams) and the site guarantees the user to carry out this operation easily from all types of devices.

The layout used is similar to that of many video streaming platforms to make it intuitive for new users to use, along with the possibility of creating an account and having a personal area where you can keep track of your purchases and reviews.

Group organization

Two groups were created to divide the front-end and back-end development, in order to allow the groups to better specialize in their field: Davide and Mouad took care of the back-end while Gabriele and Elio took care of the Front-end.

We decided to manage the work via [GitHub](#) and we also used a Notion shared sheet for the purpose of managing a to-do list.

Design phase

The idea came to one of the group after watching **Severance**, a futuristic TV series set in 2022 in which a company uses a medical “splitting” procedure to separate the personal memories of some of its employees from their work memories.

From this we took inspiration, deciding to create the website of a medical company that implants chips, through which you can live experiences, as if they were dreams, but being able to choose them.

We then created the website of this company “**Saudade**” with two main functions: booking the intervention to obtain the chip and selling dreams, as if they were films.

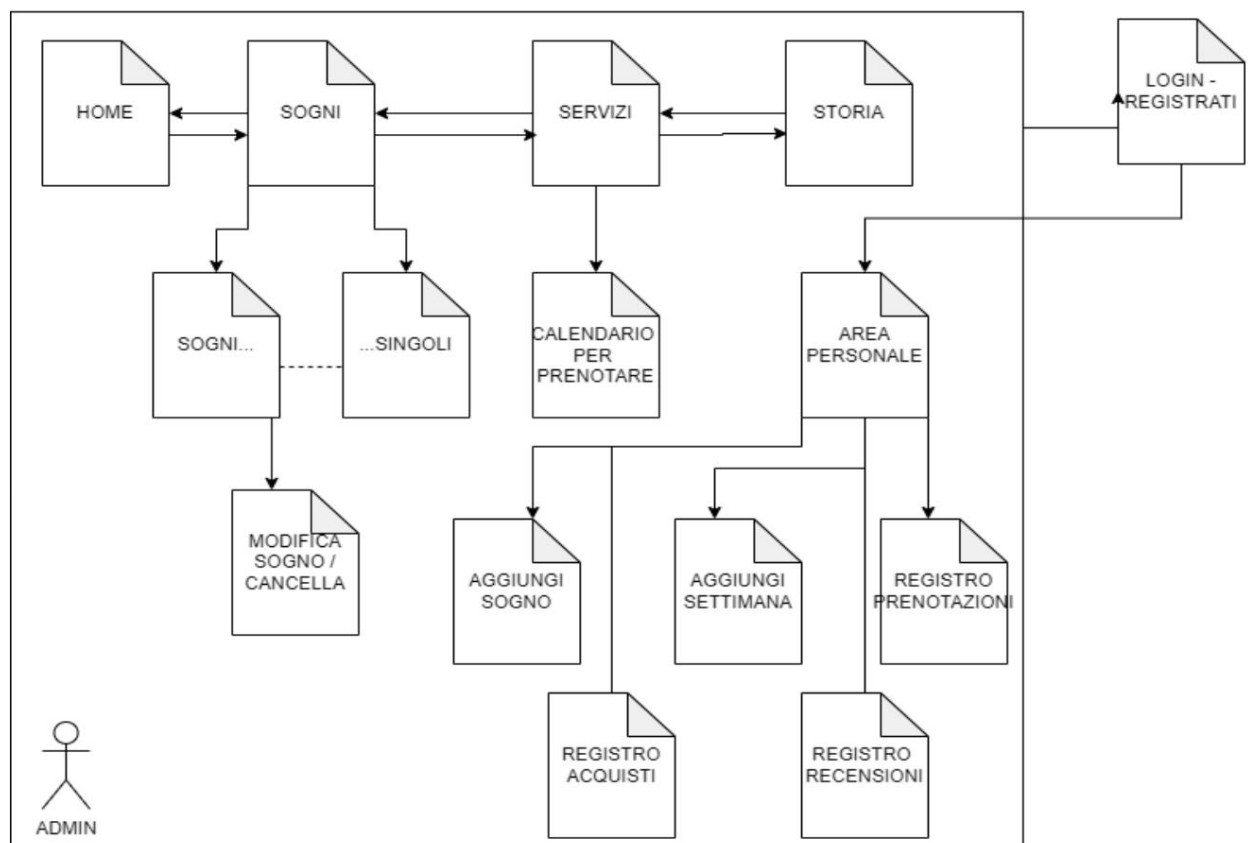
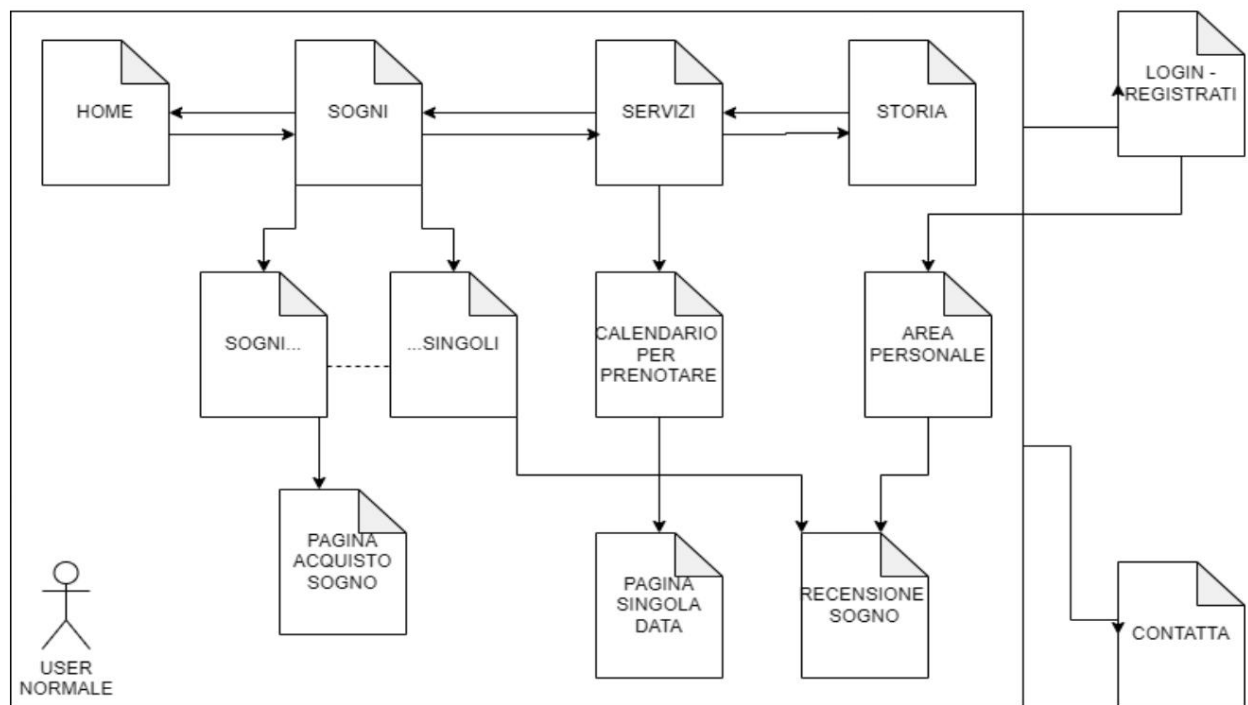
More than a medical company website, this is a website where users can buy dreams, so we decided that the website should be developed with a youthful style, with colors and animations that give it a futuristic design.

The logo, for example, represents a dream catcher and the rotation animation refers to hypnosis.

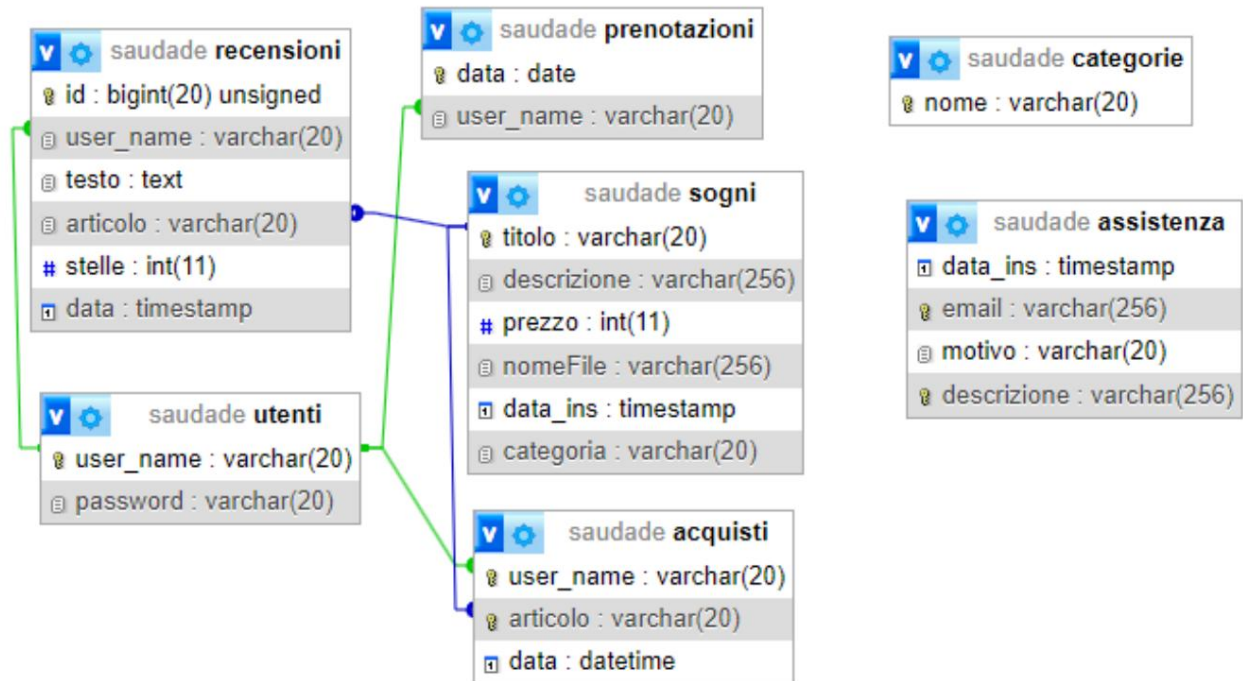
For the development of the layout we focused a lot on smartphones and desktops, that is, the devices from which we believe the traffic can come the most, without neglecting the layout for tablet-type devices.

In terms of print style, the front-end has focused more on pages that it thinks a user might want to print (pages like the login or 404 error pages have thus received less attention in terms of print).

Page layout:_____



SQL Database Schema:



Realization phase

We now list the main pages of the website, leaving aside those of the services offered and the history, which are purely informative.

Home page

For the home page we took inspiration from some online streaming services such as Netflix and Amazon Prime Video. In fact, on the main page of the site, under the section "Explore what's new" the latest dreams inserted are shown, while under the section "Top rated titles" you can find the most popular titles. The latter are calculated based on the number of stars they receive from users.

The Home page, therefore, immediately highlights the contents of greatest interest.

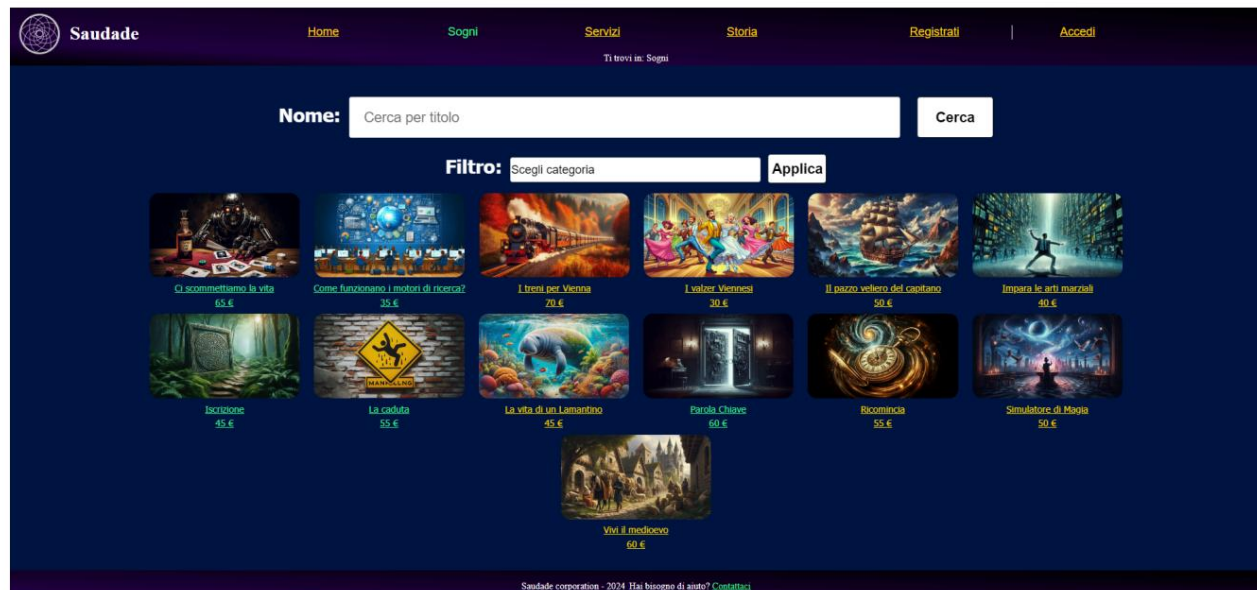
There is also a link to the **Services page**, where the user can find out about the services offered by the site and book an appointment to get the chip.

Dreams

A Saudade dream can be compared to a film that, thanks to the chip, is able to provide a 360° first-person sensory experience, just like in a dream.

For each dream there is a page that contains information such as title, genre, description, price, photo and a rating provided by various users. Below this information you can also read any reviews by users, listed in chronological order, starting from the most recent. These reviews can only be published by users who have purchased the dream in question.

There are mainly two ways to navigate through dreams: searching by name, and selecting by category (horror/adventure/...).



Dream Search Screen

Reservation

Initially this page consisted of a simple form that the user could fill in by entering their data, and then be contacted by the company to schedule the appointment.

However, by adding one small feature after another, we ended up creating a full-fledged booking system.

We decided to allow only 1 booking per day to facilitate its development: in fact, in this way the SQL table has only 2 fields (date, user_name) with date as the primary key, so that you cannot have the same date more than once, and user_name with the uniqueness constraint so that you cannot have the same person receiving the same intervention twice (if we had put the primary key composed of the two values we could not have had NULL values and we could have had more bookings, but on different dates, by the same user).

The content of the table has the following form:

```
reservations(date, user_name)
```

```
('2024-07-01', NULL),
```

```
('2024-07-02', NULL),
```

```
('2024-07-03', 'user'),
```

```
...
```

As you can see, the first 2 lines have the user_name field null, which indicates the availability of the date; while the last one we can see is booked by “user”.

These constraints are enforced both by the table constraints and by checks performed via php that should cover all possible cases (even malicious ones).

The admin has the possibility, through the “Add a week” button in his dashboard, to add other dates to the list: a working week will be added (from Monday to Friday).

User side booking

The user has access to the calendar to book his appointment through a link from the services page.

In the calendar page, the user has the opportunity to view all the available dates for each month starting from the current one. In this way we do not have too many dates on the page: a choice made to help the user navigation.

Furthermore, the notice: "Appointments available: 22" has also been inserted, thinking of users with visual impairments, who in this way will immediately know how much availability there is in that particular month.

Once the date has been selected, the user will be redirected to a page to confirm the booking with, subsequently, a booking confirmation page.

If the user has an active booking, they will see it in their dashboard, as the first item.

Saudade Home Sogni Servizi Storia Ciao Davide | Logout

Ti trovi in: Servizi >> Prenotazione

Prenota un appuntamento:

Mese:

Luglio
Appuntamenti disponibili: 22

1	2	4	5	8	9	10	11	12
15	16	17	18	19	22	23	24	25
26		29		30		31		

Saudade corporation - 2024 Hai bisogno di aiuto? [Contattaci](#)

Admin and User Dashboard

To access these pages the user must log in by entering a valid username and password.

Admin side:

The admin can

- add new dreams via the "add dreams" button
- add a week to the appointment calendar via the appropriate button.
- check the site's purchases and check the reviews left by users, thus obtaining feedback on the uploaded dreams.
- view all bookings via the "View bookings" button in its

dashboard

- check messages sent by people even if not registered on the site using the button "help messages".

User Side:

The registered user can

- check the booking date easily from the dashboard
- see the purchases made and leave a review.
- view all the reviews left

Adding new dreams From the admin

account you can add and edit dreams through a form.

The data of the new dream are inserted by the admin and, after various checks on the input (performed both with php and javascript), the presence of duplicates is checked with a SQL query. Only in negative case are they added to the database. The cover image is saved in the appropriate folder.

The modification follows the same process.



Aggiungi un nuovo sogno

Titolo sogno:

Categoria:

Prezzo:

Immagine sogno: Nessun file selezionato

Descrizione:

Descrizione

Contact form

The form to contact the company in case of problems can be reached from all pages from the link in the footer, along with the support email. The form presents, in addition to the user's email and the text of the problem, also a radio button to indicate where the problem occurred.

In addition, there is a text area where you can indicate in detail the problem that the user (even if not registered) is having. The messages will then be present in the admin dashboard.

A possible future implementation could be additional controls, to avoid spam through this form.



The image shows a contact form with a dark purple background. At the top, a breadcrumb trail reads 'Ti trovi in: Contattaci'. The main heading is 'Contatta Il team Saudade'. Below this is an 'Email:' label followed by a text input field containing 'example@abc123.com'. Underneath is the question 'Per cosa ti serve assistenza:' followed by two radio button options: 'Sogni' and 'Servizi o altro'. Below these is the label 'Descrivi problema:' followed by a large text area containing the placeholder text 'Descrivi il problema'. At the bottom center is a white button with the text 'Invia'.

Accessibility and usability

The site has been tested on different devices such as laptops, desktops, tablets and smartphones, in order to try touchscreen navigation, with good results. This was possible by adapting the font size, in order to avoid involuntary “miss-clicks”.

VoiceOver tools, such as the one provided by default by the MacOS operating system, were used to test the final result.

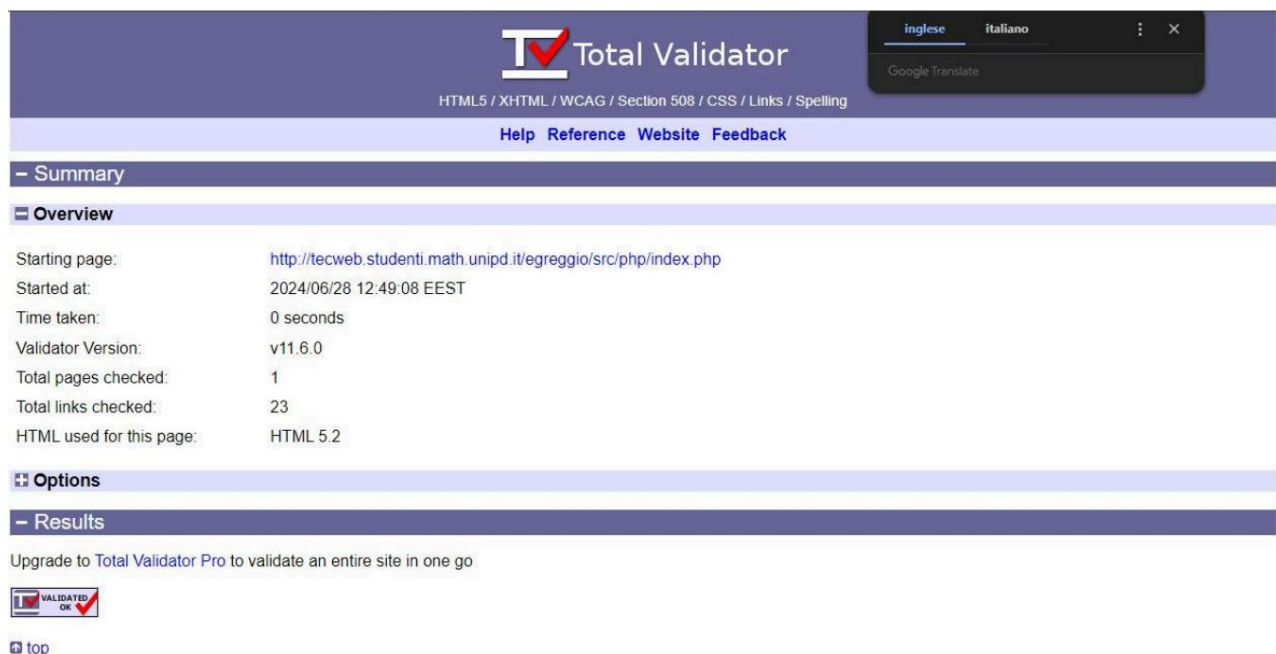
A very useful tool was Total Validator which helped us identify all the various errors, it was particularly useful for identifying numerous linguistic loans not present in the Italian dictionary, which we took care of by dedicating specific spans to them with the lang="en" attribute.

We chose to use lists instead of tables (both to list dreams and reservations) with a satisfactory result both for VoiceOver use and for graphic use, since thanks to flex we were able to give it a layout more suited to a calendar.

For color controls we relied entirely on 2 tools: The first is [Color Safe](#) which helped us in ~~choosing the~~ colors, especially those of the text, as it also allows us to immediately check the contrasts, especially for visited and non-visited links.

The second is [Color Contrast Accessibility Validator](#) which allowed us to check that each page of the site respected the AA standard.

The rest of the checks were done on Total Validator which allowed us to test the various web pages by correcting errors on the tags and on the loading speed of the site.



The screenshot displays the Total Validator interface. At the top, there's a header with the 'Total Validator' logo and navigation links: 'HTML5 / XHTML / WCAG / Section 508 / CSS / Links / Spelling'. Below this is a sub-header with 'Help Reference Website Feedback'. The main content area is divided into sections: 'Summary', 'Overview', 'Options', and 'Results'. The 'Overview' section is currently active, showing the following details:

Starting page:	http://tecweb.studenti.math.unipd.it/egreggio/src/php/index.php
Started at:	2024/06/28 12:49:08 EEST
Time taken:	0 seconds
Validator Version:	v11.6.0
Total pages checked:	1
Total links checked:	23
HTML used for this page:	HTML 5.2

Below the 'Overview' section, there's an 'Options' section and a 'Results' section. The 'Results' section shows a 'VALIDATED OK' status with a green checkmark icon. At the bottom of the 'Results' section, there's a link to 'top'.

Example of a control with total validator on the home page









colora11y.com/Contrast/

a11y Color Contrast Accessibility Validator
WCAG 2.1 AA SC 1.4.3 Test for Color Contrast

Page Analyzed: <http://tecweb.studenti.math.unipd.it/egreggio/src/php/index.php>

Congratulations!
No automated color contrast issues found on the webpage tested

Samples of GOOD contrast color-pairs.

Item	Background Color	Text Color	Font	Content	Ratio Success
1	 HEX: #001542 rgb(0,21,66)	 HEX: #FFFF rgb(255,255,255)	Family: "Times New Roman" Size: 32px (24pt) Style: normal Weight: 700 Line-Height: 48px (36pt)	66 Seaside 99 Code Snippet Pass 1	Required ratio: 3:1 Current ratio: 17.7:1 Contrast passes. Test Colors Pass 1
2	 HEX: #5a4386 rgb(90,69,134)	 HEX: #FFFF rgb(255,255,255)	Family: Tahoma, sans-serif Size: 28px (21pt) Style: normal Weight: 700 Line-Height: 42px (31.5pt)	66 Explora le novità 99 Code Snippet Pass 2	Required ratio: 3:1 Current ratio: 7.08:1 Contrast passes. Test Colors Pass 2
3	 HEX: #00154280 rgb(0,21,66,0.5)	 HEX: #FFC700 rgb(255,215,0)	Family: Tahoma, sans-serif Size: 18.4px (13.8pt) Style: normal Weight: 400 Line-Height: 27.6px (20.7pt)	66 Backroom 99 Code Snippet Pass 3	Required ratio: 4.5:1 Current ratio: 13.09:1 Contrast passes. Test Colors Pass 3
4	 HEX: #001542 rgb(0,21,66)	 HEX: #FFC700 rgb(255,215,0)	Family: Tahoma, sans-serif Size: 20px (15pt) Style: normal Weight: 400 Line-Height: 30px (22.5pt)	66 Otterlei 99 Code Snippet Pass 4	Required ratio: 4.5:1 Current ratio: 12.62:1 Contrast passes. Test Colors Pass 4

Test another webpage

<http://tecweb.studenti.math.uni>

Example on the color palette of the index page

Safety

Numerous measures have been taken to protect the security of the website and its database.

All SQL queries are executed via prepared statements with parameter binding to prevent attacks such as SQL injection, preventing the insertion of malicious code.

Below is an example of the code portion through which comments on various dreams are inserted into the database:

```
$functions->openDBConnection();
$stmt = $functions->getConnection()->prepare
    ("INSERT INTO recensioni (user_name, testo, articolo, stelle) VALUES (?, ?, ?, ?)");
$stmt->bind_param("sssi", $user_name, $recensione, $sogno, $stelle);
$ris = $stmt->execute();
$stmt->close();
$functions->closeConnection();
```

Also, all admin pages have one or more checks to verify that the actions are actually performed by the admin. If a user (not admin) tries to access them, they will receive a custom message, based on the type of error.

Help with user navigation

The site has been developed with a certain attention to facilitating user navigation.

Starting from the navbar (i.e. the navigation bar that precedes the content), to make it more accessible, we have inserted some `<nav>` tags, which are used to group the main navigation blocks of the site.

Additionally, to avoid the screen reader reading the menu every time, a navigation aid has been added that allows you to go directly to the content of the page.

The navbar is also equipped with a **breadcrumb** to avoid disorientation of the user during navigation. As for the menus from mobile devices and tablets, a sidebar has been developed that covers the right part of the screen and that can be activated via a hamburger menu located at the top right. We decided to occupy the right part as seen in the theory course, and to insert the clickable logo, which takes you back to the homepage.

The pages dedicated to the registered user, such as their personal area, have **different error messages** based on the type of problem encountered, to provide the most precise feedback possible.

Let's take as an example the **dashboardUser** page which prints the following messages when the related problem occurs:

- **The user is not logged in** → Page reserved for logged in users, execute `login` to access
- **Admin is trying to access this page** → User-restricted page
- **If the logged in user was not found in the registered accounts table** (very particular case) → User not found

In addition, the **404 error page** has also been developed which looks like this:



Motivation for implementation choices and critical parts of the project

In order not to repeat the mistakes made in the previous project and to improve the loading speed of the site, we decided to limit the use of flexboxes, recycling the same flex for both the dream list and the calendar. This choice made it more difficult to develop a responsive layout suitable for all devices, so a lot of time was spent finding a

solution that did not require the use of flexbox and that was equally functional. Even the choice of colors was a process that took longer than we had estimated, it was not easy to find colors with the right contrast and that were at the same time harmonious with each other. We often had slides within slides, so the real challenge was to be able to have a well-readable text.

Final notes and future implementations.

An important implementation, if this site was not only an educational project but also had a real functional purpose, would be to add additional information to the registration procedure, such as email or phone number.

It would also be necessary to add a booking management system, to allow both the user and the admin to modify and delete a booking. Not implemented yet because it would have taken too much time.

The same goes for comment management, the user should be able to delete his own comments and the admin should be able to remove all irrelevant comments.

Furthermore, always taking inspiration from services like Netflix, inserting the possibility of seeing a small trailer on the dream page would represent an interesting added value.

All in all, we are happy with how we developed this project, having learned from the mistakes made in our first work, unfortunately insufficient, delivered last session.