ITS TECNOLOGIE DELL'INFORMAZIONE E DELLA COMUNICAZIONE

Backend System Integrator

Unità Formativa: Programmazione web - front-end

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Titolo argomento: Progetto Space

Aim

Create an website with various areas that display information about a space agency, its work and its team members

Requirements

Structure and behavior

Create a website about a space agency

The website should have at least the following areas:

- homepage
- news page
- missions
- astronauts
- join us (astronaut application page)
- gallery
- about (about the agency)

General

All pages should include:

- the agency name and logo
- main navigation (switching between different pages/areas)
- secondary navigation (jumping to different sections in the same page)

Homepage

The homepage should include a quick introduction to the website to help users identify what's it about and to navigate to more in-depth content

It should include a content area for the latest news posts (at least 3). The content area could be a sidebar or another container

It should also include some information from each of the other areas (missions, astronauts, join us,, gallery, about) as well as CTAs (call to action) to navigate to those areas

Missions

This area should include a list of missions (at least 20). They should be grouped in three sections: past, current and future missions. Each mission should include at least a name, code, destination, image, equipment, crew.

The crew should include links to the astronauts page and to the specific astronauts for each mission

The missions page should be responsive, list in mobile view and cards on larger viewports

Astronauts

This area should include a list of astronauts (at least 20). They should be grouped in two sections: active and retired. Each astronaut should include at least a name, code, bio, photo, age, nationality, years of experience and links to missions in which the astronaut has participated

The astronauts page should be responsive, list in mobile view and cards on larger viewports

Join us

This area should contain an application form to gather information from future astronaut candidates:

- First, middle (optional) and last names

- Desired mission (Choice of missions should match future missions in the missions area)

- Age, gender, hair and eye color (color picker or choose from a list)

- Contact information: email, phone numbers, address, etc

- Weight (max 100kg - sorry in space weight is limited)

- A shot biography (max 255 characters)

- Any other information that you want

The form must be fully client-side validated

Gallery

This section includes images from previous missions, future missions, crew landings and any other space related images

You are free to design it as you see fit, however it should be fully responsive

About

This section includes some information about the agency, what it does, its history and any other relevant information

You are free to design it as you see fit, however it should be fully responsive

Responsiveness

All the pages of the website should be fully responsive and should be designed mobile-first

Responsiveness does not just mean that the website is functional at different viewport sizes but that the device and screen real estate are taken into consideration for the user experience (appropriate font sizes, element positioning, navigation aids, etc.)

Optional

- create another area where you can embed some videos about space from youtube or vimeo. Don't exaggerate this, think about performance and the user experience

- create another area called 'destinations' with a list of previous and possible destinations for the missions. Provide some images and details for each. Link missions to destinations

Important

- Use meaningful names (for files, classes, id's, etc.)

- The code should be well documented

- The code should be well indented

- The data structures should be effective and the code should be efficient

- You need to be able to explain each line of your code

Bonus (extra points)

Bonus 1: Animations and transitions

Use transitions and animations to change the look and feel of your application in some instances, e.g. when switching from one breakpoint to another, or when the user interacts with your application (e.g. hover, focus, etc)

Transitions and animations should be appropriate to the situation and not exaggerated

Using CSS transitions - CSS: Cascading Style Sheets

Using CSS animations - CSS: Cascading Style Sheets

css-tricks - animation

This Ain't Disney: A practical guide to CSS transitions and animations

Bonus 2: Backend form handling

- build a small back-end server to process and display received astronaut applications

- any back-end language may be used (php, python, nodeJS, etc)

- the readme.md file should include detailed information on how to run and access the back-end

- any web server (local or remote) may be used to host the application

- the back-end application should have a web page that displays the list of applications received. This page should be linked to from the front-end website

Help

Plan your page structures and CSS selectors before starting

Use a CSS reset stylesheet or write your own

Divide your application logically into multiple HTML and maybe CSS files

Compatibility

The project should be tested and work properly on: **Chrome, Firefox, IE11**

Compatibility with other browsers is a nice **bonus**

Libraries, frameworks and language features

Do not use any external libraries or frameworks.

You have to write all the code yourself.

If you use any language features not see in class, they have to be correct, tested and justified.

Documentation and validation

Comments and code documentation

- All HTML and CSS files should contain comments and be well documented
- CSS files should have a header and contain comments where needed
- HTML files should contain comments to indicate important sections
- Follow all the comments and documentation requirements in Appendix 01
- JS files (if used) should follow the documentation standards:
  - JSDoc header documentation for every file
  - JSDoc documentation for every function

Validation

HTML files should be validated https://validator.w3.org/

CSS files (if used) should be validated https://jigsaw.w3.org/css-validator/

Readme

Include a readme.md file that includes at least the following sections

- Introduction / Project description
- Usage (how to set up, run and use the application)
- Configuration and technical characteristics
- Files and project structure
- Features delivered
    - feature 1: description of feature 1
    - feature 2: description of feature 2
    - feature 3: missing
- Bonuses delivered
    - Bonus 1: description of bonus 1
    - Bonus 2: missing
- Browser compatibility
    - IE11: tested and fully compatible
    - Chrome v##.##.##: tested and partially compatible - feature x not working

- Opera v##.##.##: not tested or not functional

- External resources (Links and description of external resources such as JSON files, APIs, DBs, etc)

- License and contact information

- Authors: names, roles and team composition

- Changelog and version history

- Any other information that you think is important

Screenshots

No screenshots are provided. Develop your own style, look and feel