Name: Daniel Chavez
Professor: King
Assignment: Collaboration log for Final Project
Date: 10/16/2025

README: Instead of doing one big log, I added sections (which represent directories) with the programs names of the things I used outside sources for

Files that I own and or made:

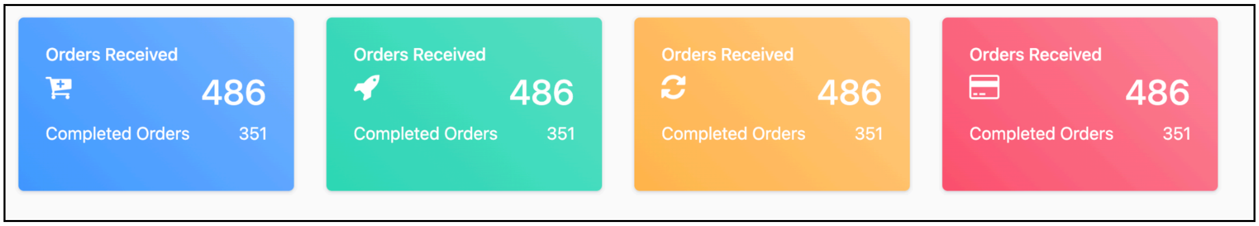
- /BackgroundServices/CacheRefresherService.cs
- Pages/Programs/Programs.razor
- Pages/Programs/Programs.razor.cs
- Pages/Programs/Programs.razor.css
- Pages/Astronauts.razor (Jackson also helped write it)
- /Pages/ISS.razor
- /Pages/ISS.razor.css
- /Pages/RawData.razor
- /Pages/Spacecraft.razor
- /Pages/Spacecraft.razor.css
- /Data/Entities/AstronautEntity.cs
- /Data/Entites/SpaceProgramEntity.cs
- /Data/Entites/SpacecraftEntity.cs
- /Data/Seeders/AstronautSeeder.cs
- /Data/Seeders/SpaceProgramSeeder.cs
- /Data/Seeders/SpacecraftSeeder.cs
- /Data/SpaceTrackerDbContext.cs
- /Models/n2yoModel.cs
- /Models/openMeteoModel.cs
- /Models/rocketLiveModel.cs
- /Models/spaceDevsModel.cs
- /Services/n2yoService.cs
- /Services/openMeteoService.cs
- /Services/rocketLaunchLiveService.cs
- /Services/spaceDevsService.cs
- /Program.cs (Anthony and I co own this file)

Pages/

For all CSS pages:

For all .css pages I was inspired by these websites and their designs:

- October 9th 2025 - https://www.bootdey.com/snippets/view/Gradients-dashboard-cards - 20 mins



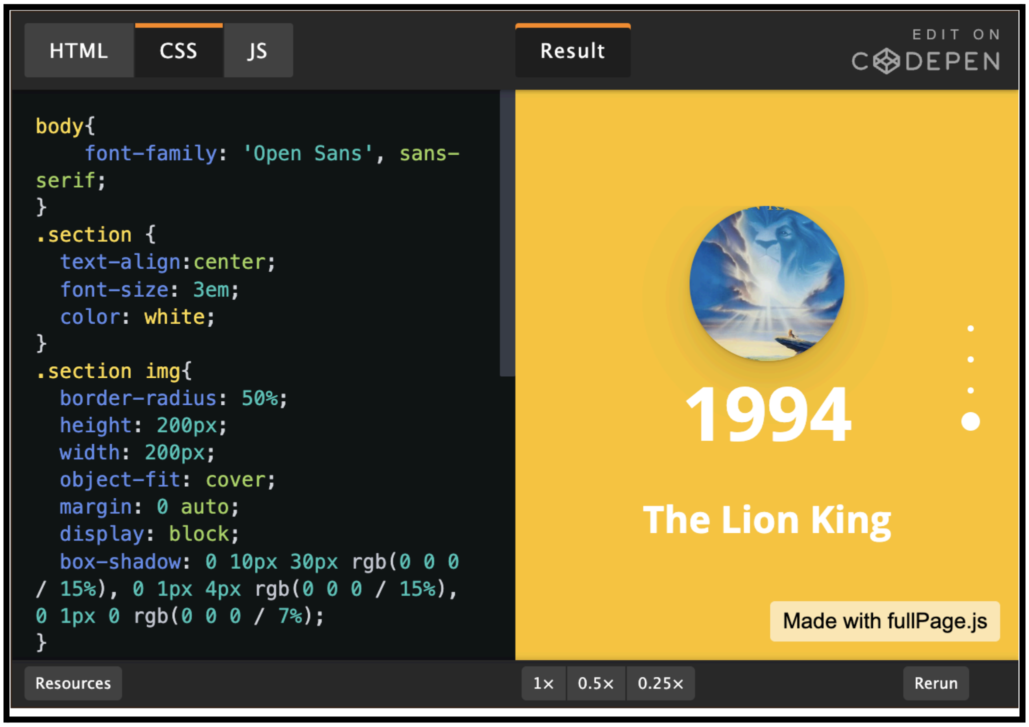
Orders Received 486
Completed Orders 351

Orders Received 486
Completed Orders 351

Orders Received 486
Completed Orders 351

Orders Received 486
Completed Orders 351

-
- October 9th 2025 - https://codepen.io/alvarotrigo/pen/zYEGVdV - 20 mins



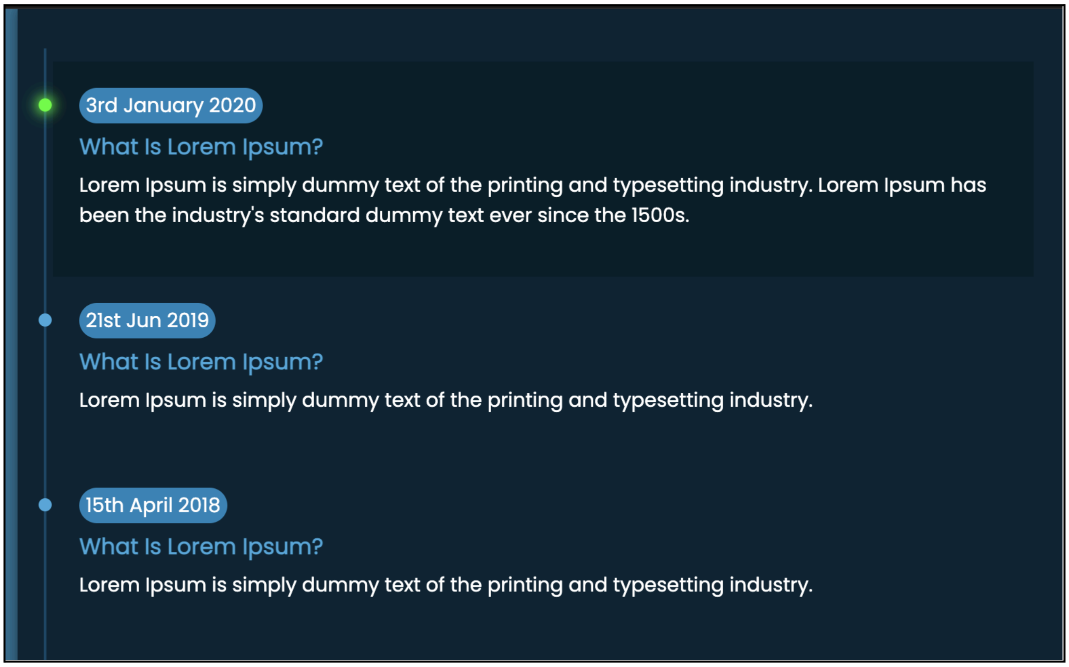
```
body{
    font-family: 'Open Sans', sans-serif;
}
.section {
  text-align:center;
  font-size: 3em;
  color: white;
}
.section img{
  border-radius: 50%;
  height: 200px;
  width: 200px;
  object-fit: cover;
  margin: 0 auto;
  display: block;
  box-shadow: 0 10px 30px rgb(0 0 0 / 15%), 0 1px 4px rgb(0 0 0 / 15%), 0 1px 0 rgb(0 0 0 / 7%);
}
```

1994

The Lion King

Made with fullPage.js

-
- October 9th 2025 - https://codepen.io/alvarotrigo/pen/ExwYyNW - 20 mins



3rd January 2020

What Is Lorem Ipsum?

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s.

21st Jun 2019

What Is Lorem Ipsum?

Lorem Ipsum is simply dummy text of the printing and typesetting industry.

15th April 2018

What Is Lorem Ipsum?

Lorem Ipsum is simply dummy text of the printing and typesetting industry.

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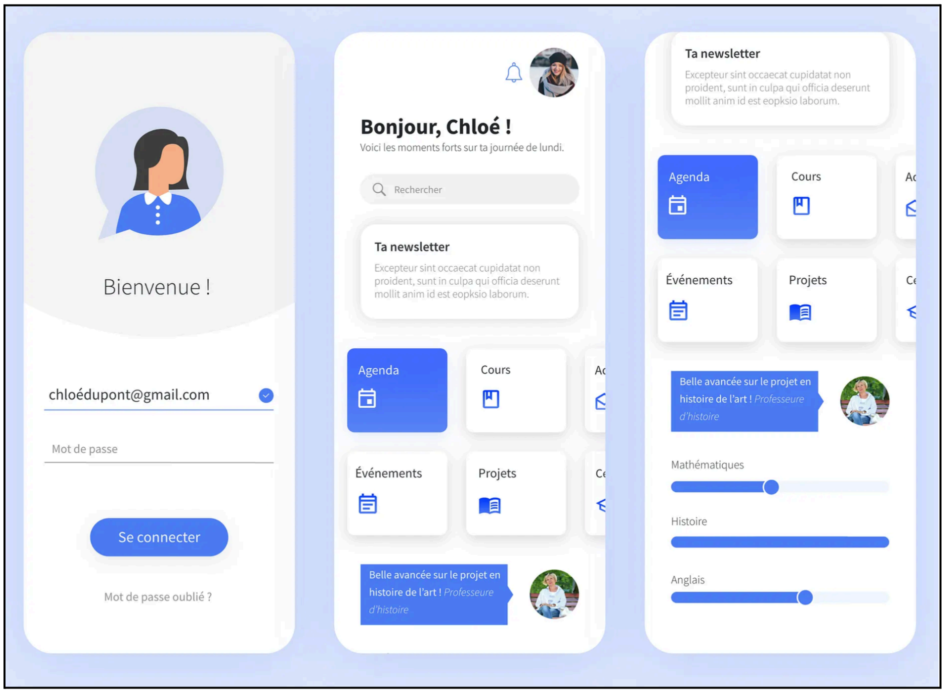
- October 9th 2025 - https://dribbble.com/shots/13933793-School-App-Loggin - 20 mins



Bienvenue !

chloédupont@gmail.com

Mot de passe

Se connecter

Mot de passe oublié ?

Bonjour, Chloé !

Voici les moments forts sur ta journée de lundi.

Rechercher

Ta newsletter

Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est eopksio laborum.

Belle avancée sur le projet en histoire de l'art ! *Professeure d'histoire*

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- **All in all, most if not all .css code was written by Claude.Ai,** however, the original design choices and ideas were inspired by the above templates. I got chunks and pieces from each website and pasted to claude to them make a comprehensive design.

Astronauts.razor

- 11/14/2025 - Google Gemini - 20 mins
    - We were having some issues with this function: LoadAstronauts() in the main code section. The issues was it would retrieve astrinouts from our database, but when it reached the end of the db, it would return null, but the async call would still be waiting for something. Eventually, Gemini helped me implement this: if (newAstronauts.Any()), where it would check if we any more astronaut to add and if it is empty we just do nothing.
- 11/16/2025 - ChatGPT - 1 min
    - Used it to write the description, comments, and organized the code

ISS.razor

- 10/27/2025 - Microsoft Docs - https://learn.microsoft.com/en-us/aspnet/core/razor-pages/?view=aspnetcore-10.0&tabs=visual-studio - 1hr
    - Read how razor pages work, how to connect and call the backend, and background functions
- 11/14/2025 - Mdmn - https://developer.mozilla.org/en-US/docs/Web/HTML/Reference/Elements/iframe - 20 mins
    - Read up on how iframes work and how they function. Allowed me to implement youtube video to ISS Pages

- 10/27/2025 - Microsoft Docs - https://learn.microsoft.com/en-us/dotnet/csharp/asynchronous-programming/ - 20 mins
    - Read up on the MS Docs about await Task.waitAll() and how this function works and how I can apply it to our webpage
- 10/28/2025 - ChatGPT - 30 mins
    - Used chatGPT to better organize the webpage with properly nesting items in the right classes and properly labeling them
- 10/27/2025 - Google Search - 10 mins
    - Searched "how to implement function in blazor webpage"
    - This allowed me to see how to call a function from the backend and properly use that function in the blazor webpage
- 11/16/2025 - ChatGPT - 1 min
    - Used it to write the description, comments, and organized the code

ISS.razor.css

- Refer to the above CSS section
- Created by Claude 11/09/2025 - 10 mins

Programs/Programs.razor

- 10/27/2025 - Microsoft Docs - https://learn.microsoft.com/en-us/aspnet/core/razor-pages/?view=aspnetcore-10.0&tabs=visual-studio - 1hr
    - Read how razor pages work, how to connect and call the backend, and background functions
- 10/28/2025 - ChatGPT - 30 mins
    - Used chatGPT to better organize the webpage with properly nesting items in the right classes and properly labeling them
- 11/16/2025 - ChatGPT - 1 min
    - Used it to write the description, comments, and organized the code

Programs/Programs.razor.cs

- 10/27/2025 - Microsoft Docs - https://learn.microsoft.com/en-us/aspnet/core/razor-pages/?view=aspnetcore-10.0&tabs=visual-studio - 1hr
    - Read how razor pages work, how to connect and call the backend, and background functions
- 10/29/2025 - StackOverflow - https://stackoverflow.com/questions/25053887/order-a-list-of-objects-by-its-datetime-property - 20 mins
    - Read up on stackoverflow and how I can order my objects by using their datetime attribute and properly sort the objects
- 11/16/2025 - ChatGPT - 1 min
    - Used it to write the description, comments, and organized the code

Programs/Programs.razor.css

- Refer to the above CSS section
- Created by Claude 10/28/2025 - 10 mins

Spacecraft.razor

- 10/27/2025 - Microsoft Docs - https://learn.microsoft.com/en-us/aspnet/core/razor-pages/?view=aspnetcore-10.0&tabs=visual-studio - 1hr
    - Read how razor pages work, how to connect and call the backend, and background functions
- 10/28/2025 - ChatGPT - 1 hr
    - I has having issues connecting the db search bar to the website. I tried a few times myself, but I would accidentally corrupt the database, send malformed queries which failed, and other general issues. I eventually asked gpt to help me, and it implements this : “dangerousKeywords.Any(keyword => Regex.IsMatc” which only allows SELECT queries.
    - It also added a lot of the core logic for RunSqlQuery() function
- 11/16/2025 - ChatGPT - 1 min
    - Used it to write the description, comments, and organized the code
- 11/10/2025 - Microsoft Docs - https://learn.microsoft.com/en-us/aspnet/core/blazor/components/event-handling?view=aspnetcore-10.0 - 1 hr
    - I read up on event handling in C# and how it works like @onclick or @bind and how to implement those into the webpage. I later used these in the razor page to trigger sql searches, populate search bars, or help sort objects and items

Spacecraft.razor.css

- Refer to the above CSS section
- Claude did also help format and make the sql section look and feel nice
- Created by Claude 10/27/2025 - 20 mins

BackgroundServices/

CacheRefresherService.cs

- 10/25/2025 - Microsoft Docs - https://learn.microsoft.com/en-us/aspnet/core/fundamentals/host/hosted-services?view=aspnetcore-9.0&tabs=visual-studio - 1 hr
    - Read the MS docs to get an understanding of how background services work, and I could call an api endpoint to have some level of caching
- 10/25/2025 - ChatGPT - 20 mins
    - I was having some issues setting up the background services module, and I later found out the issue was I needed to setup a scope for the services and HTTP calls
- 10/25/2025 - the medium https://medium.com/@zaynt.dev/understanding-serviceprovider-createscope-in-net-a-deep-dive-a0d4549cc4b1 - 20 mins
    - Read this helpful article about scopes and how they work in the broader system
- 11/16/2025 - ChatGPT - 1 min
    - Used it to write the description, comments, and organized the code

Data/Entities

- 11/05/2025 - Microsoft Docs - https://learn.microsoft.com/en-us/ef/core/modeling/entity-properties?tabs=data-annotations%2Cwith-nrt - 20 mins
    - Read this article to get an understanding of how EF core works in Microsoft and how I can apply that to our application. Since traditional variables work well is a basic sql database, but custom objects like “spacecraft” or “programs” don’t work well, I had to use the Microsoft EF core to place the json inside the sql db
- 11/16/2025 - ChatGPT - 1 min
    - Used it to write the description, comments, and organized the code

Data/Seeders

AstronautSeeder.cs

- 11/14/2025 - Microsoft Docs - https://learn.microsoft.com/en-us/dotnet/api/microsoft.entityframeworkcore.dbcontext.addasync?view=efcore-9.0 - 1 hr
    - Read the MS docs to see how to add new elements to a ef core once creating a new entity.
- 11/16/2025 - ChatGPT - 1 min
    - Used it to write the description, comments, and organized the code

SpaceProgramSeeder.cs

- 11/14/2025 - ChatGPT - 20 mins
    - I was having issues with malformed images and broken links, so I had chatGPT help me hardcode and override some images in the database, so I add new and working images. I ended up with something like:cexisting.Image = new ProgramImage { ImageUrl = LunaImageUrl };
- 11/16/2025 - ChatGPT - 1 min
    - Used it to write the description, comments, and organized the code

Data/**SpaceTrackerDbContext.cs**

- 11/05/2025 - Microsoft Docs - https://learn.microsoft.com/en-us/ef/core/get-started/overview/first-app?tabs=netcore-cli - 1 hr
    - Read the MS Docs to get an understanding of how the EF core works for sql database things in C#. I learned how to connect a data base, how to setup the entity, and context for our database usage
- 11/05/2025 - ChatGPT - 20 mins
    - I was having issues on setting up the db and properly adding fields to the entity for spacePrograms. I later learned from Chat that you need to use the .Property function to add new fields to the db: “ entity.Property(e=>e.Name).HasColumnName("name");”

- 11/16/2025 - ChatGPT - 1 min
    - Used it to write the description, comments, and organized the code

Models/

n2yoModel.cs

- 10/18/2025 - Microsoft Docs - https://learn.microsoft.com/en-us/aspnet/mvc/overview/older-versions/getting-started-with-aspnet-mvc3/cs/adding-a-model - 1 hr
    - Read the MS Docs to get a understand of how models work in C# and how I can apply that to the return types of the api.
- 10/18/2025 - N2YO Docs - https://www.n2yo.com/api/ - 20 mins
    - Read the Docs to see how the api returns objects, so I can format the models correctly
- 10/20/2025 - ChatGPT - 20 mins
    - Asked chatGPT about nested Models and how that functions different than non nested models
    - I later found out that all you do is declare a new class and then reference that in the model class: public List<SatelliteAbove>? Above { get; set; }

openMeteoModel.cs

- 10/18/2025 - Open Meteo - https://open-meteo.com/ - 20 mins
    - Read the Docs to see how the api returns objects, so I can format the models correctly

rocketLiveModel.cs

- 10/22/2025 - RocketLive - https://www.rocketlaunch.live/api - 20 mins
    - Read the Docs to see how the api returns objects, so I can format the models correctly

spaceDevsModel.cs

- 10/22/2025 - Space Devs - https://ll.thespacedevs.com/docs/ - 20 mins
    - Read the Docs to see how the api returns objects, so I can format the models correctly

Services/

n2yoService.cs

- 11/10/2025 - ChatGPT 1 min
    - I used chatGPT to create comments, logs, prologue, and clean up the code
- 11/10/2025 - N2YO Docs - 30 min
    - https://www.n2yo.com/login/edit/
    - I read the N2YO docs to figure out how the api code works and how to do calls

openMeteoService.cs

- 10/18/2025 - ChatGPT - 1hr
    - This was the first service I ever wrote, so I used chatGPT to tell me how a Blazor service works

    - I also asked chatGPT how do an async function and how do they function
- 10/18/2025 - Microsoft Docs - https://learn.microsoft.com/en-us/dotnet/csharp/language-reference/keywords/async - 45 min
    - I read these docs to understand how async calls work, what triggers them, and how they function overall
- 10/18/2025 - OpenMeteo API Docs https://open-meteo.com/ - 15 min
    - I read the api docs to understand returns types, format, and how to do an api call
- 11/16/2025 - ChatGPT - 1 min
    - I used chatGPT to add comments, and format code for better readability

rocketLaunchLiveService.cs

- 10/18/2025 - ChatGPT - 30 min
    - I used chatGPT here to help debug some things like JsonSerialization. I was previously getting a bug where the Rocket api call was having issues getting parsed. ChatGPT later diagnosed the issue to be that I needed to nest the item in a list, so like: Task<List<RocketLaunchItem>?>
- 11/16/2025 - ChatGPT - 1 min
    - I used chatGPT to add comments, and format code for better readability, and add prologue

spaceDevsService.cs

- 10/18/2025 - Space Devs docs - https://ll.thespacedevs.com/docs/ - ~2hrs
    - I spend about 2 hours collectively reading the space Devs docs and api calls to help debug C# model problems, understand how spacedevs returns, calls, and parameters work
- 10/25/2025 - Microsoft Docs - https://learn.microsoft.com/en-us/dotnet/standard/data/sqlite/?tabs=net-cli - 35 min
    - I read the MS Docs to get an understanding of using sqlite inside a program in C#
- 10/25/2025 - ChatGPT - 1 hr
    - I used chatGPT as I have having issues properly connecting the DB to the program, I later find out it was a simple library import which I did not do: “using spaceTracker.Data.Entities”
    - I was unfamiliar with how to implement a sql db into a program for searching and querying, so It did a majority of the heavy lifting when it came to connecting the db to the spaceDev service. However, once I was able to see how it implemented the db in GetAstronautsAsync() function, I properly implemented the db in SpaceProg() for programs.
- 11/06/2025 - Microsoft Docs - https://learn.microsoft.com/en-us/dotnet/standard/serialization/system-text-json/how-to - 1 hr
    - I was having issues once more with json serialization, so I went to the json docs to get an understanding of how it works and how to implement basic json serialization. After reading, I finally understood issues I was having with my services

- 11/16/2025 - ChatGPT
    - I used chatGPT to add comments, and format code for better readability, and add prologue