

Personal Project

For as long as I can remember I have always been into the functioning of the human body and its structure. I have read dozens of books about the human heart and other organs. However, the most helpful knowledge that I gained during reading involved the brain. Awareness about its anatomy and how it functions has helped me greatly to understand what kind of behavior defines our personality and which one indicates suffering from some diseases. The books showed me how much potential we possess, how our memory works, how to act with people who suffer from a nervous system disease (for example, depression). The acquired knowledge has helped me to broaden my horizons and become a more knowledgeable person. Therefore, while I was choosing the topic for my personal project I immediately was aware that it would concern the brain. The very first idea that came to my mind was to prepare a human brain model. I have always dreamt about being in possession of such a model in my room although it costs quite a lot of money. That is why, I decided to put my manual skills into action and improve them at the same time. Besides creating a brain model I have opted for sharing my freshly acquired knowledge by making a presentation which I would share via designated websites. Both my model and presentation might be considered major-league products connected with my personal interests. I wish people were more aware of how their brains function which might help them to understand their own behavior.



Video game with infinite voxel world generation written in rust

The aim of my personal project was to learn a new programming language in the form of **“Rust”**. I have chosen it, because in comparison to languages like C or C++ it enforces memory safety, that means many of the potential errors can be caught during development rather than in the production. To test the capabilities of this technology and also develop a tool for future testing I have decided on developing a video game engine inspired by one of the most popular games **“Minecraft”**. The aim for the project was to get a simple infinite world generation, which would run smoothly(that means at least stable 30 frames per second), be compact and run across multiple platforms. During the development I have also played around with **“Bevy”** game engine, which beside introducing ECS(Entity Component System) architecture which made modifying project much easier, it also have enable me to run final product in the web browser as a side effect of web assembly support built in into both **“Rust”** and **“Bevy”** game engine.

Figure 1. Image of corrupted shader causing overlap in the game textures.

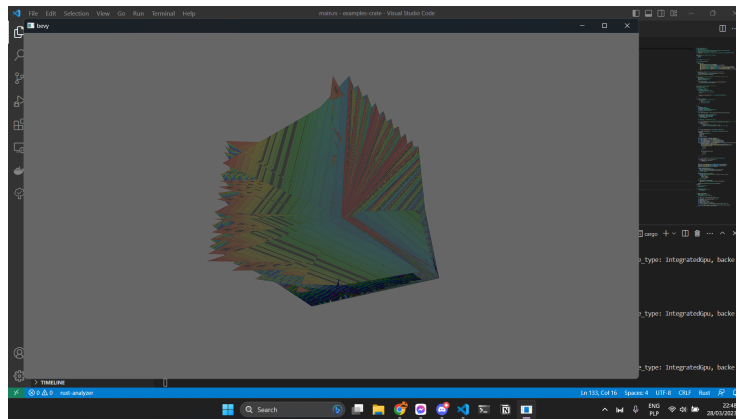


Figure 2. Final product running on both native windows 11 and google chrome browser.

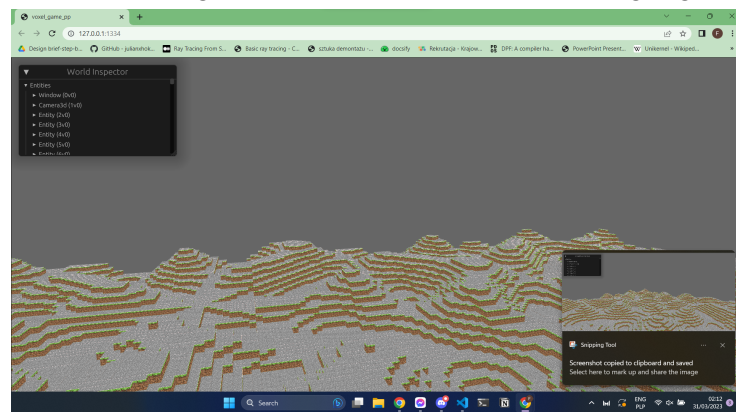
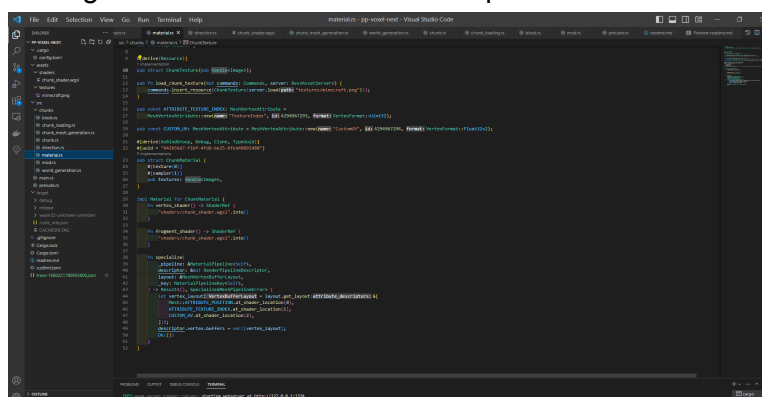
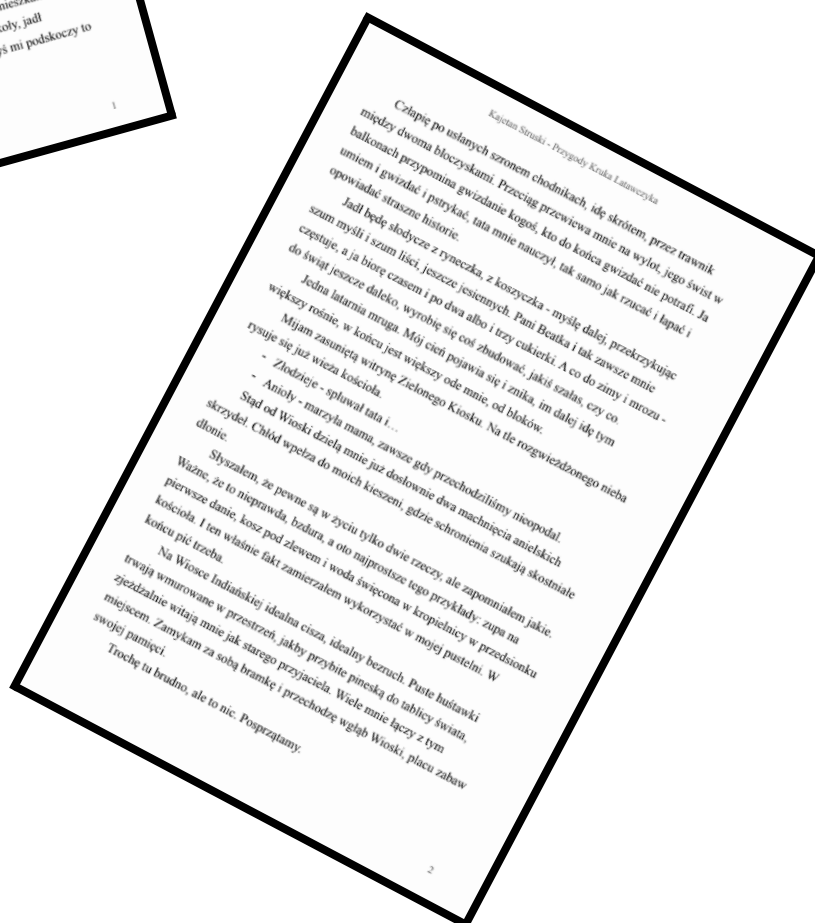
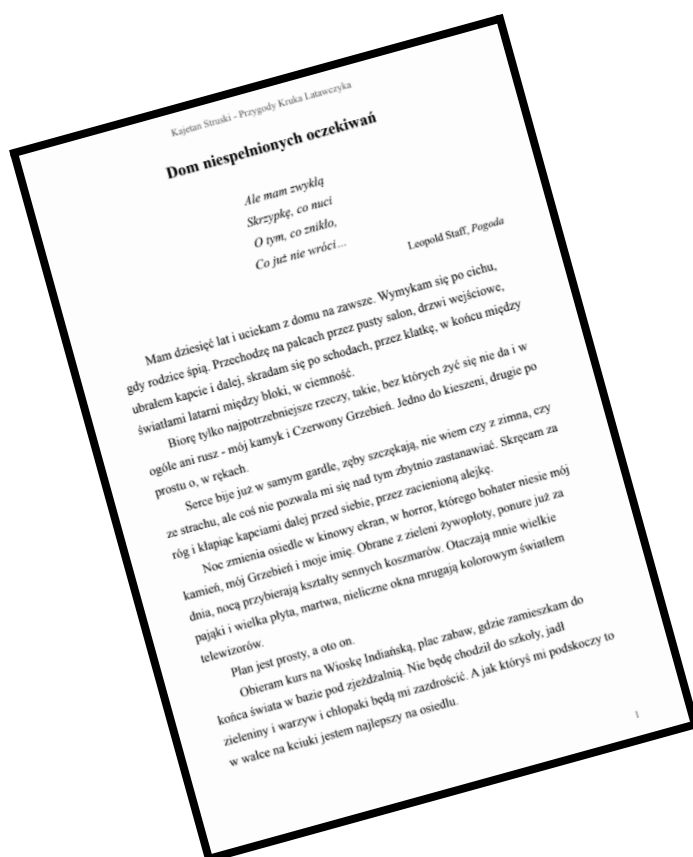


Figure 3. Image of source code from development tool visual studio code.



The Short Story - Personal Project Product

I wrote the text narrating the short story in the genre of belles-lettres, containing the dense atmosphere and enigmatic characters, all in base of my own ideas. The product itself required both poetic and storytelling abilities to be created. I put effort into presenting some philosophical perspectives as well as the suggestive jokes and plot twists, all in the length of about 10.000 letters. The main character delivers us the messages associated with the process of growing older, he is sharing thoughts that could be called really mature, especially considering his age... because on the other hand, age is the main character of the story.



Personal project – Composing a short piano piece

The Learning goal

Once we were given the task to come up with a topic for a Personal Project I knew exactly what to do. I was aware that the process of achieving my learning goal and creating the final product has to be fun for me because otherwise, I would never find the motivation to spend many hours on something I do not enjoy. Having that in mind I decided that I want to compose a piano piece. Instead of learning how to play a certain piece, I wanted to create something. Therefore my learning goal is to learn how to write my own piano pieces.

Description of the product

As my final product, I wish to compose a short piano piece and write down the notes in the form of a digital file or a paper copy. During the process, I hope to develop my creativity as my piece has to be original, creative, and most importantly captivating. I hope that my piece will be entertaining and subtle at the same time.

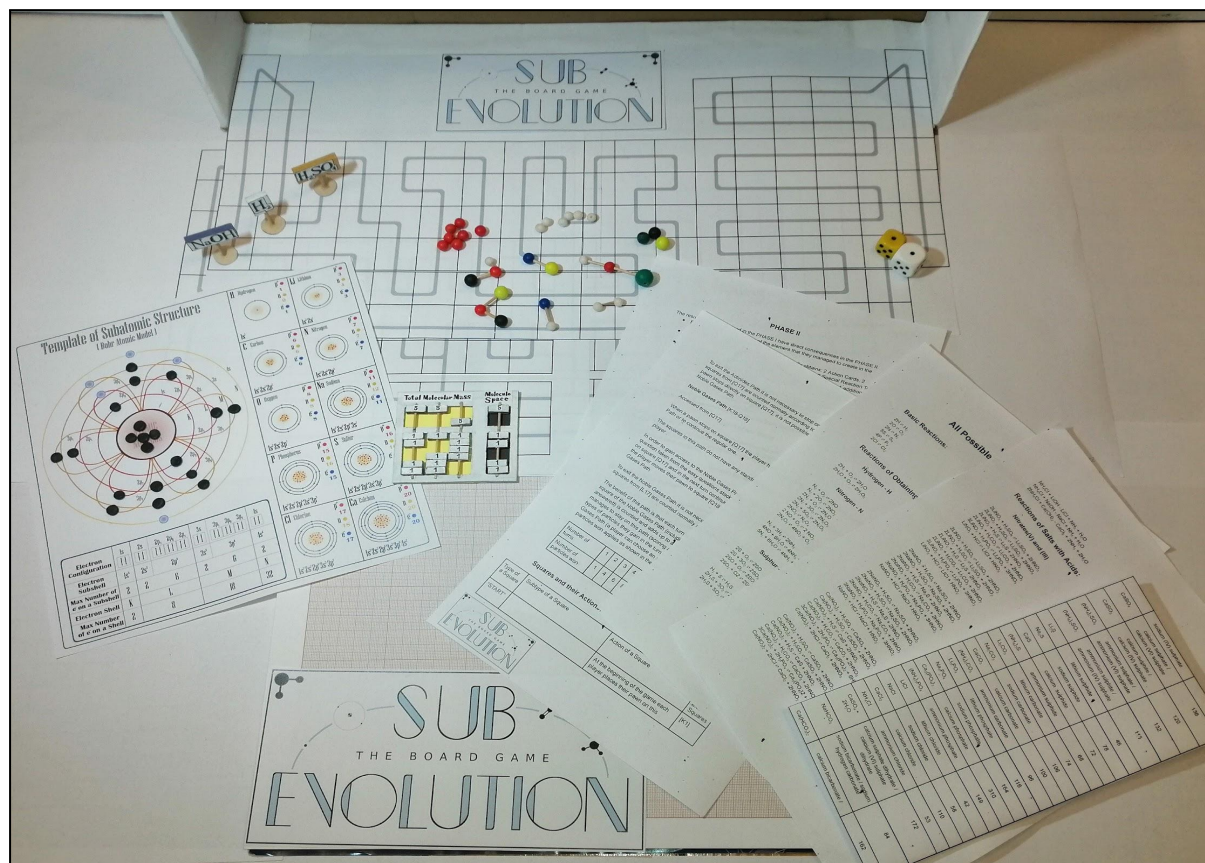
The final product



PERSONAL PROJECT

A Chemistry Board Game

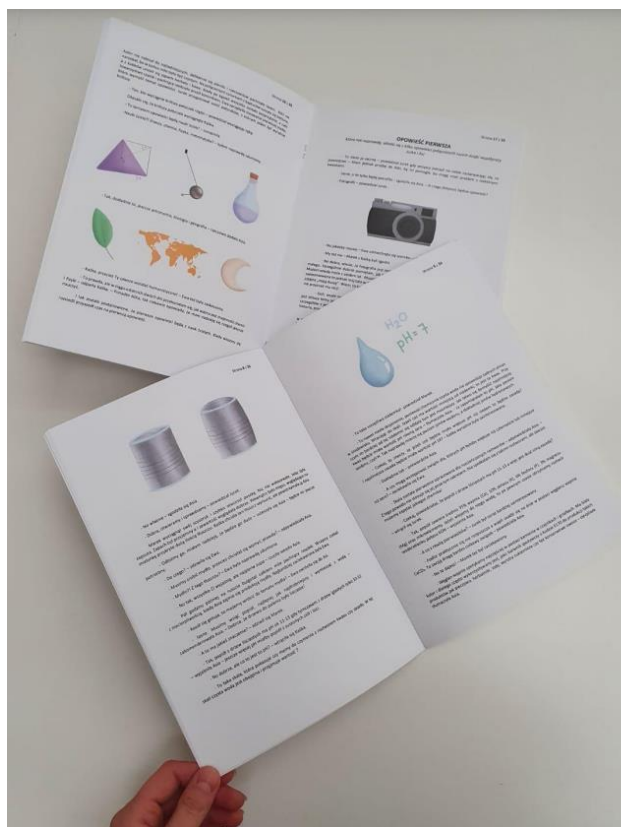
The Learning Goals of my Personal Project were revolving around the topics of inorganic chemistry and board games since my product idea was to create a board game utilising simplified chemical mechanisms, that could teach chemistry in an approachable way while playing. I chose to concentrate on the topic of molecules because I wanted to take advantage of the enormoussness of possibilities that arise when combining atoms together. Apart from that, my aims were to consolidate my knowledge by insightful understanding of the topic, as well as to challenge my skills in creating a board game, which has been my pursuit since long before the project. I began my work with profound research on everything that could be included in the gameplay and in the next step my mind was preoccupied with overthinking each and every aspect of the game, so that its mechanics were fully consistent. Then I turned to designing tangible elements in detail, finalising concepts of rules and writing the rulebook. Ultimately, I printed or manually created all the necessary parts and the product was ready to play with and test by a wider audience. The whole process finally took more time than I had initially predicted but due to lots of obstacles I encountered I feel that I gained a lot of knowledge and additional experience in terms of chemistry, board games-related topics but also structuring and planning.



Collection of short stories

For my Personal Project, I decided to make a collection of short stories that explain chemical matters in a straightforward way with illustrations that make it easier to keep up with the text. This project was an opportunity to connect my biggest passion - chemistry and activities I enjoy doing in my spare time (writing and drawing), as well as a way to help students learn and find their passion for sciences.

I managed to create a collection of stories connected together with a separate beginning and ending. The main storyline tells about teens being stranded from the outside world by an avalanche and staying in a hut for a few days. To fight off boredom they tell stories connected with science, especially with chemistry, which are indeed separate stories in my book. I alluded to the book "The Decameron" by Giovanni Boccaccio where the main characters are also forced to stay together for ten days and they tell each other stories every day. To make the story more interesting and to make it easier to remember information I incorporated many colourful illustrations.

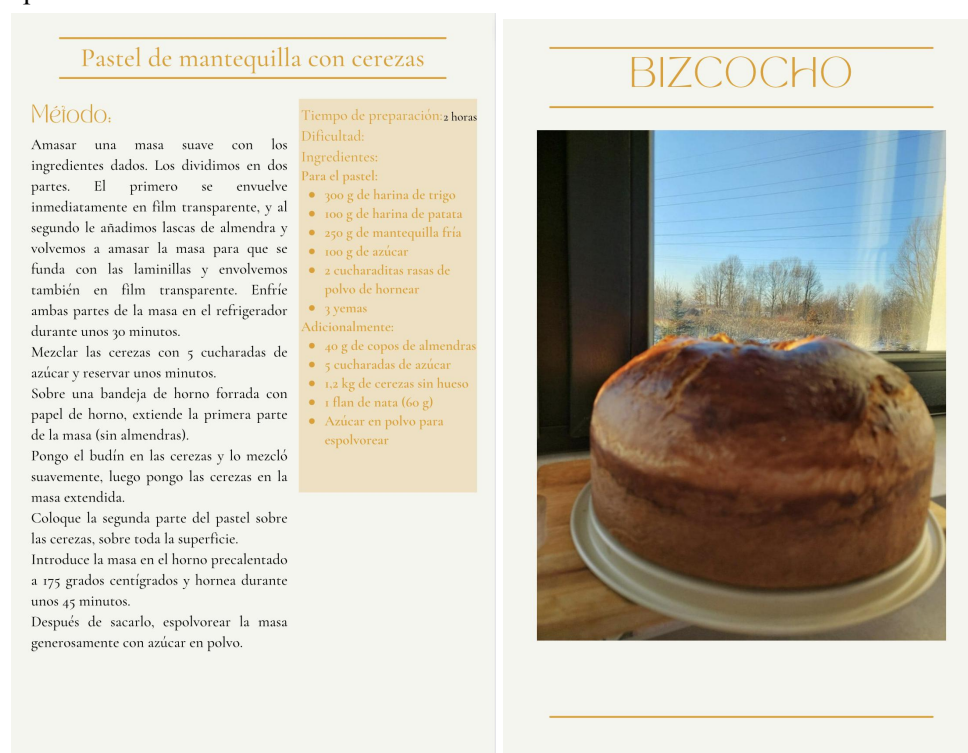


Ebook with recipes for sweets in Spanish

While working on the Personal Project, I wanted to create an ebook with recipes for sweets in Spanish. It's all because I'm interested in both languages and baking. It is important that the selected product is related to our passions, because working on it takes a whole year, so combining it with fulfilling our passions makes working on the project a pleasure.



My ebook was created in electronic form, it contained a title page, a table of contents and 15 recipes. Each recipe, in turn, had a list of ingredients, the level of difficulty of preparing the recipe, the preparation time and the described method of preparation. Everything was obviously written in Spanish.



PERSONAL PROJECT: 30-day workout schedule - website

For my learning goals, I wanted to improve my skills in making a website and planning workouts. For my personal project, I created a website that consisted of a 30-day plan for workouts. It was made using an online program called “Wix”. All days had descriptions of specific exercises. I also included rest days and explained why they were important. The schedule also provided warm-up exercises for beginners. I added information about the targeted muscles and health benefits of each workout. The descriptions of exercises were explained in steps, so it would be easier to follow. My website also had a subpage with a bibliography, so people could find the sources from which I found the information for my workout schedule.

Exercises

Click on the button to view a description of the training of a chosen day

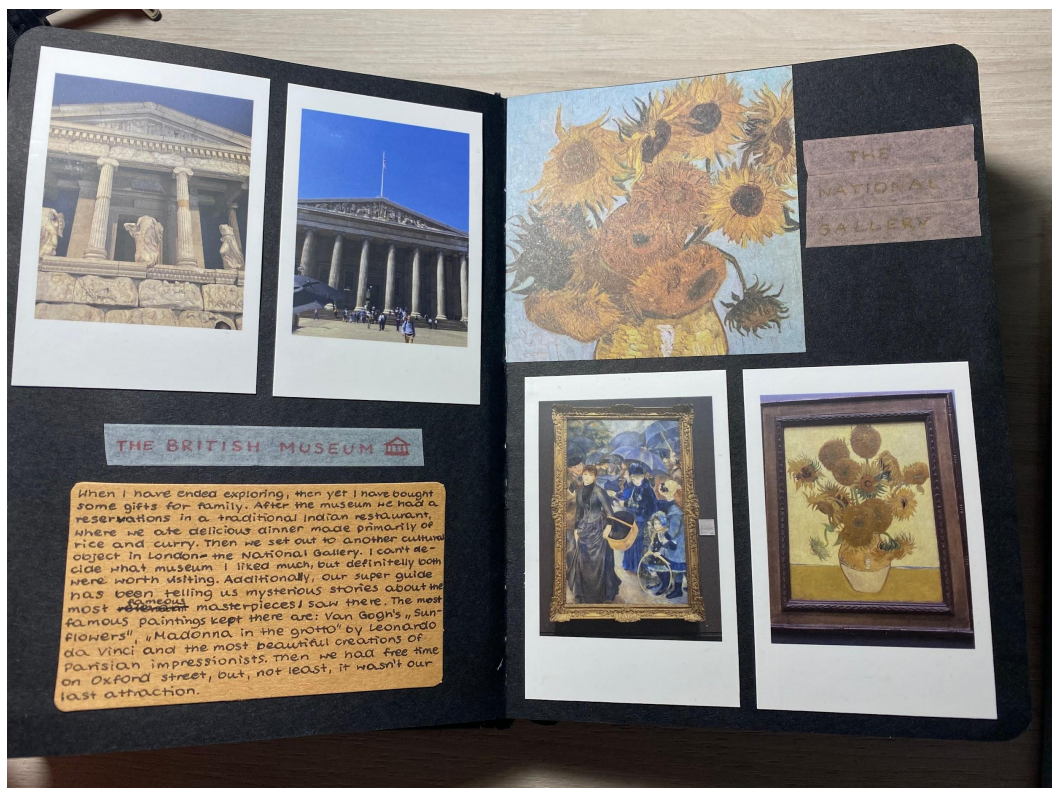
Day 1	learn more	Day 11	learn more	Day 21	learn more
Day 2	learn more	Day 12	learn more	Day 22	learn more
Day 3	learn more	Day 13	learn more	Day 23	learn more
Day 4	learn more	Day 14	learn more	Day 24	learn more
Day 5	learn more	Day 15	learn more	Day 25	learn more
Day 6	learn more	Day 16	learn more	Day 26	learn more
Day 7	learn more	Day 17	learn more	Day 27	learn more
Day 8	learn more	Day 18	learn more	Day 28	learn more
Day 9	learn more	Day 19	learn more	Day 29	learn more
Day 10	learn more	Day 20	learn more	Day 30	learn more

30-DAY WORKOUT SCHEDULE							Home	Warm-up	Exercises	Bibliography
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY				
Core workout	Running	ABS workout	Rest	Upper body exercises	Lower body workout	Rest				
Cardio workout	Running	Core workout	Rest	Bodyweight exercises	Lower ABS workout	Rest				
Core workout	Running	ABS workout	Rest	Upper body exercises	Lower body workout	Rest				
Cardio workout	Running	Core workout	Rest	Bodyweight exercises	Lower ABS workout	Rest				
Core workout	Running									

Travel scrapbook

For a long time I was wondering about the product for my Personal Project. I wanted it to be something that will be a pleasure for me to create and, at the end, I will be proud of it. I also thought about its value for me as a student. It was obvious that the product should teach me some knowledge, be challenging, but pretty made.

That is why I have chosen a travel scrapbook as my product. I always wanted to do it, but I never had time. Thanks to the Personal Project I was obligated to create it, so I had to find time for it. Now, when I have finished my product, I can say that it taught me a lot of self-discipline and time management. The travel scrapbook is also a great remembrance of my holidays, places I visited and people who I shared it with.



IRONMAN VIDEO

For my learning goal I decided to learn how to edit short videos and my product was a short film about the Ironman competition in Gdynia, 2022.



Screenshots from my product

My product and learning goal ended up being a success, but it doesn't matter if you succeed or not, relevant is to show your engagement and do scrutinised documentation. For my ATL's I have chosen research skills and self-managing skills; probably this part was the longest and the most time consuming. Important is to remember to somehow check whether you completed your success criteria. Below there is a part of mine aims.

My success criteria

Function	Educate people between the age of 10 - 60 what triathlon is and encourage them to take up sport.
Time	I have given myself 5 days for needed shots and a week of editing the final video. I assume it will take me up to 5 hours to modify the video for the product to be polished, but simple enough for me to make. My end product must be completed by November 28 th.
Equipment	I must have waterproof equipment when recording due to unexpected weather.

Generally PP is not hard and mustn't be complicated, because not the product itself is important, but your documentation. It will probably take 80% of the time you devote for the project. So I recommend you focus on this to be precise and complete. If you stick to the deadlines then you won't be overwhelmed with the amount of work.

**An acrylic triptych - *Dancing for Morpheus*,
acrylic on canvas**

The goal of my Personal Project was to paint a triptych with acrylic paints. It was a good experience, chosen with the help of teachers and friends thanks to their advice - *choose something you'd like to do*.

I decided to follow my passions and paint.



Nevertheless, Personal Project must pose some kind of challenge, and mine was painting humans.

I decided to connect my present passion with one of the older ones - dancing and at some moment the idea came to me - a triptych of people doing ballet in their sleep. It's entitled *Dancing for Morpheus*.

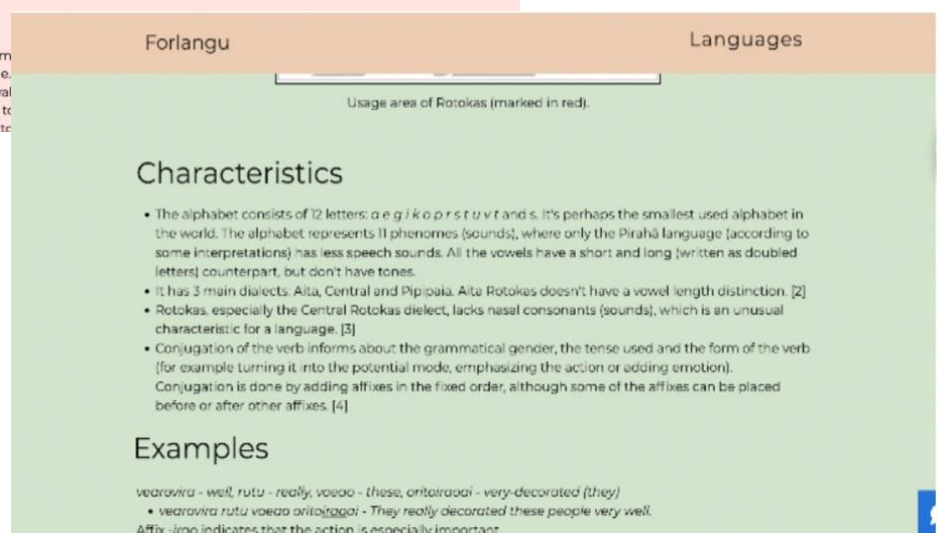
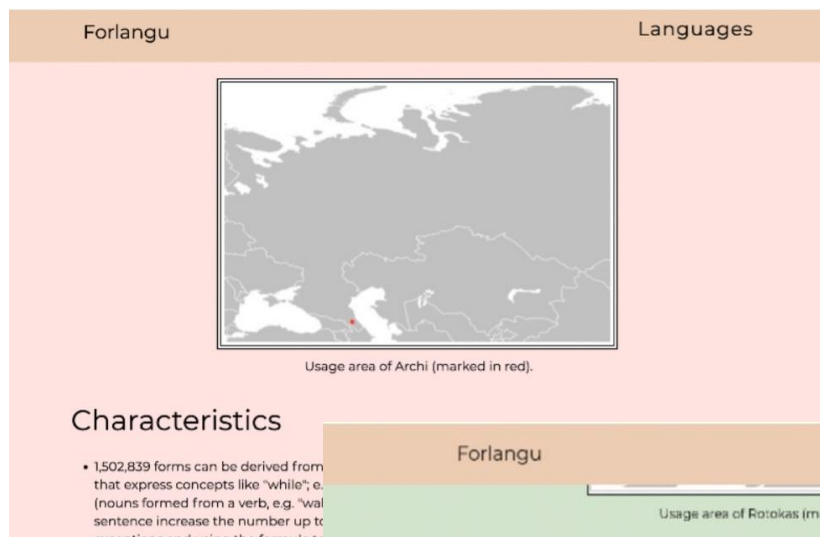
Nevertheless, I had to review my knowledge of ballet positions and figures which luckily didn't take a lot of time.

I also related this project to my social media presence, and posted reels and photos of the whole process on my Instagram.

I wanted this project to expand my skills and help me improve what I already knew how to do. And that was what it did for me, while helping me achieve all chosen success criteria.

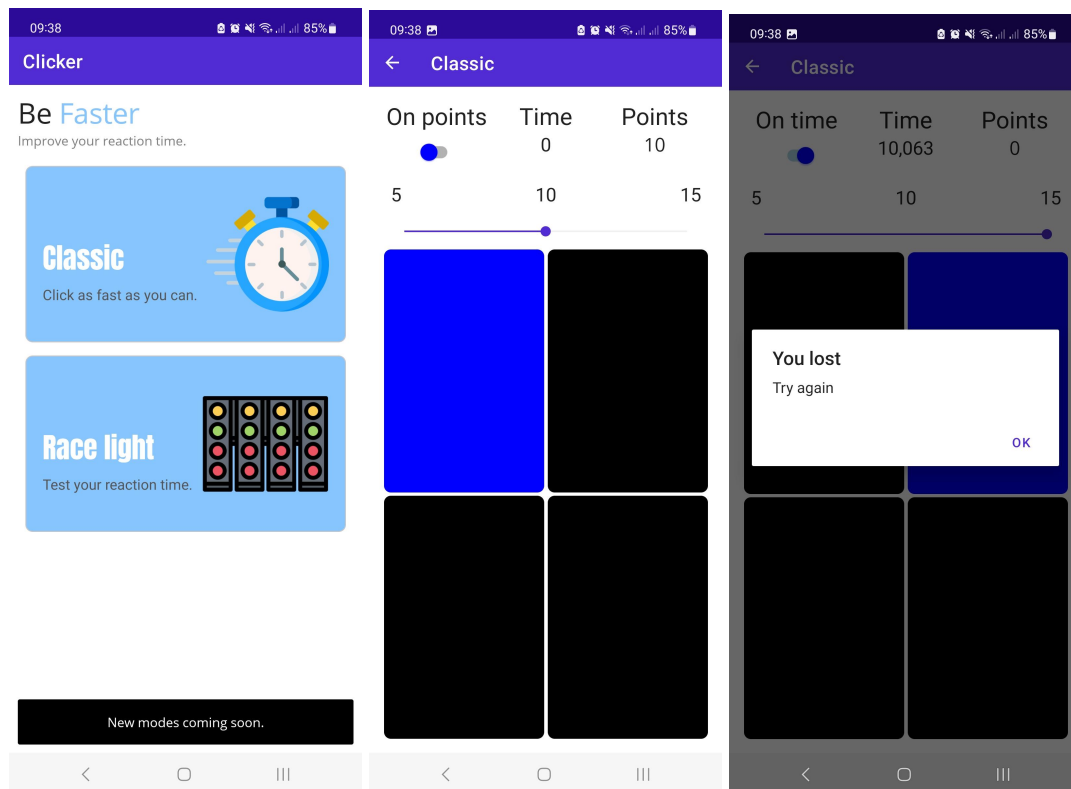
Website about unusual languages

My learning goals were to learn about foreign languages and to improve my skills of making a website, because I liked reading about exotic cultures and had made another website before. Combining those two goals, I decided to make a website about unusual languages. By using an online website builder called Wix, I created a website called "Forlangu", which consisted of the mainpage and 6 subpages. Each subpage was about one language: Pirahã, Taa, Esperanto, Tuyuca, Rotokas and Archi. On each of the subpages was information about the language's speakers, a map of where it is spoken, characteristics of the given language, example words and sentences and a button that upon clicking showed the bibliography.



My product

My final product is a mobile game. It provides 2 Game Modes. First one is named classic where you have to click the blue button as fast as possible and the second one is named Race light in which the player should click as fast as the color changes (only ones).



Reflection: The impact of my project on my learning

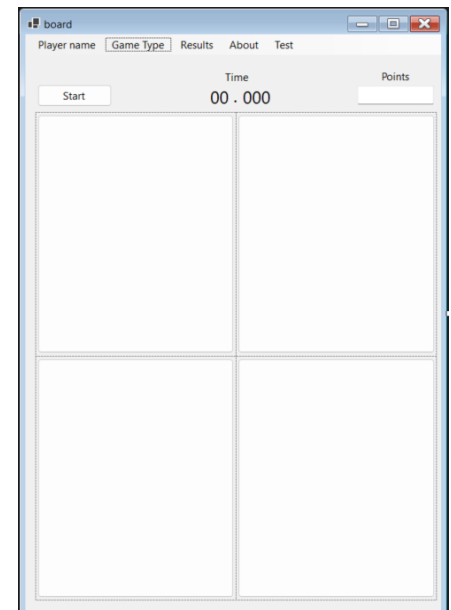
During this project, I learned a lot. Firstly I want to say that I was very motivated to achieve my goal. It helped me a lot because instead of playing games or spending time on youtube I did something useful. This is why I didn't have any problems with time management. When it comes to programming I made huge progress in the last few months. Now I can program in C# and .Net Maui at the beginner level. Programming also made me more patient and calm. Often when I wanted to debug there was a mistake or a few of them and this was irritating at the start. Then I learned to make my code look cleaner, which made finding mistakes a lot easier. Overall, I am very happy with the outcome of the project. It was a lot of hard work, but it was also a lot of fun and I learned so much. I am also proud of my ability to persevere and stay patient through all of the challenges and setbacks. I believe that this project has taught me valuable skills and has set me up for success in the future.

Applying Skills to create a product: Thinking Skills (Critical and Creative Thinking):

Upon completion of my research on the programming language C#, I started developing a demo version of a game. The initial step in this process was to design the visual appearance of the game, which proved to be a relatively straightforward task. My previous research on C# proved to be highly beneficial during the creation of this game, as I was able to reuse some code and easily find solutions to any problems that arose.

One of the most significant challenges I encountered during the development of this demo version was the implementation of a system to save game results. This task required a significant amount of time and effort, but ultimately, I was able to successfully implement it.

Following the completion of the demo version, I turned my attention to the second part of my research project, which focused on the .Net Maui framework. Similar to my research on C#, I utilized online tutorials and video tutorials to gain a comprehensive understanding of this framework. Once I had completed this research, I proceeded to modify and upgrade the game's demo version to incorporate the new knowledge I had acquired.



However, I soon discovered that this task was more challenging than I had anticipated. The main obstacle I encountered was the implementation of the MVVM (Model-View-ViewModel) pattern, which is used to separate program logic and user interface controls. Additionally, I struggled with navigation and was unsure of what I had done incorrectly, even after following the steps outlined in the tutorial. Fortunately, I had a reliable resource to turn to for assistance in these matters - the online community on stack overflow. Below you can see the answer to my question.

UPDATE

In your XAML you need to use `MenuListViewSelectedItemCommand` instead of `MenuListViewSelectedItem`:

```
<TapGestureRecognizer
  Command="{Binding Source={RelativeSource AncestorType={x:Type viewmodels:MainMenuVi
  CommandParameter="{Binding .}"/>
```

That's because you need to bind to the Command that the MVVM source generator creates, not the method itself.

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edited Nov 28 at 11:45

answered Nov 27 at 21:05



ewerspej
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