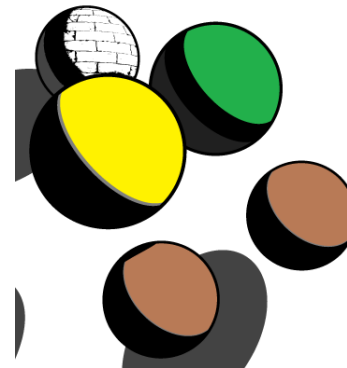
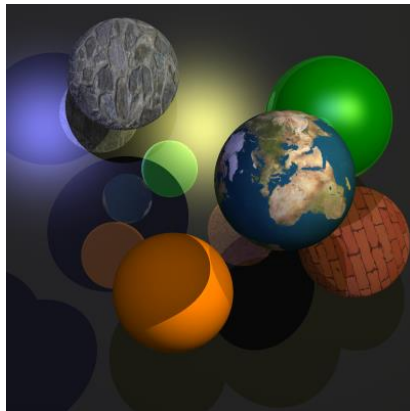
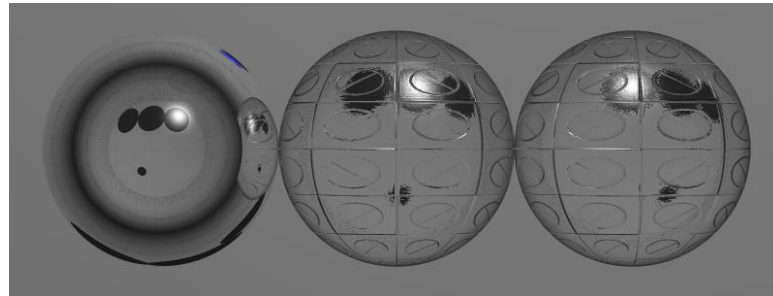
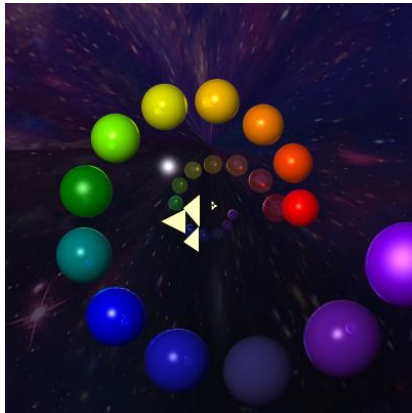


Thomas von Ascheberg's Portfolio

Programming projects from 2015 to 2020

C++ Raytracing Framework

Oct. 2019 – Jan. 2020

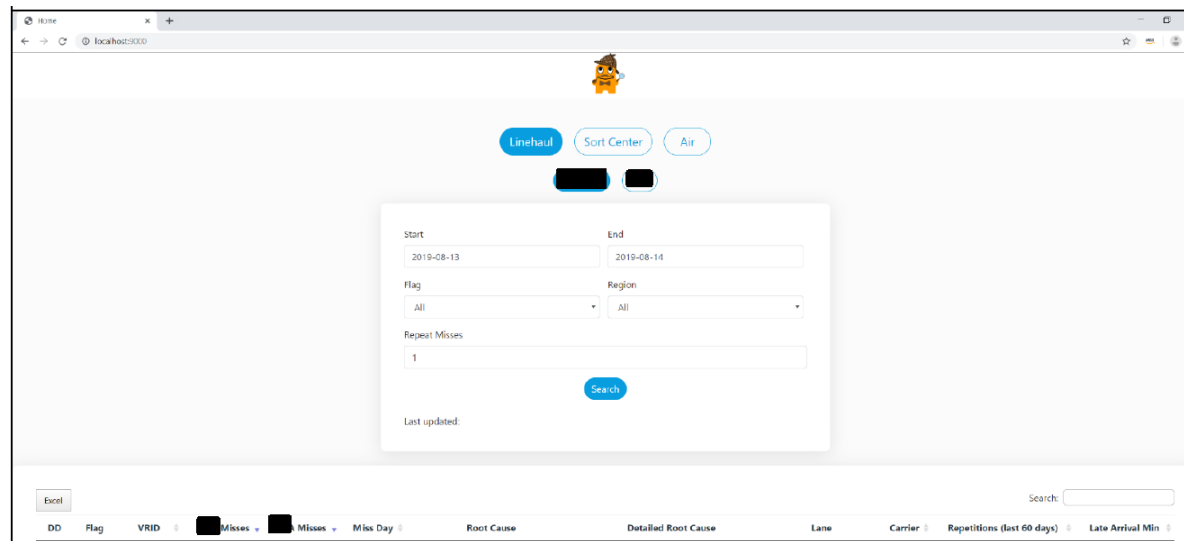


Description :

Raytracing project developed with My-Linh Ho for the “Advanced Graphics” course of Tobias Isenberg at Polytech Paris-Sud. The purpose of this project was to discover the raytracing process in graphics and its differences with the classic “shading” graphics programming.

Amazon Miss Monitoring Tool

May 2019 – Sep. 2019

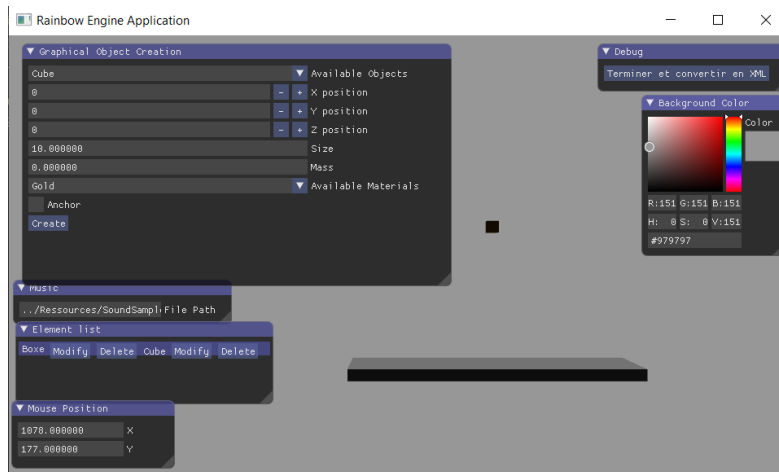


Description :

Project built while during my 4-month internship at Amazon EU. This software is a monitoring platform to report transportation misses in Amazon's Logistic. This was my first full-stack experience as I was fully in charge of the project. This project also gave me a lot of experience with AWS (as I built it in AWS).

Rainbow Engine

Jan. 2019 – May 2019

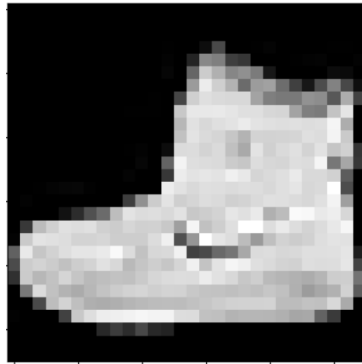
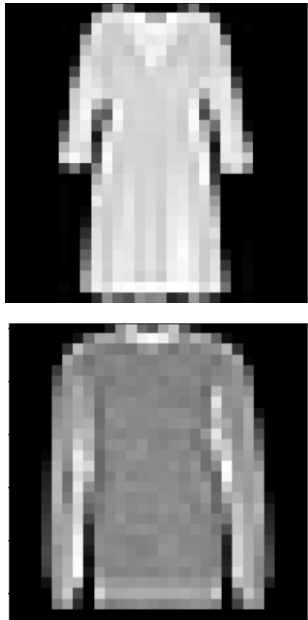


Description :

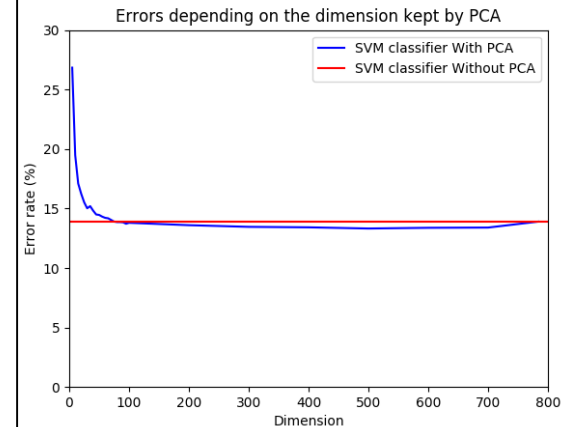
3D Engine built with Célestin Collin, Jordane Minet, Alexis Proust and Eurydice Ruggieri. This OpenGL-based engine supports all the basic features of a game engine : 3D Graphics/Rendering, Sound Management (OpenAL), Physic, Level Editor, etc. The main goal here was to test our skills (technical and management) with a complex software to develop. The main guideline was to abstract things as much as possible for the user in order to make the engine easy to use for beginners.

Python Image Recognizer

Jan. 2019 – Feb. 2019



```
def DistMin(PCAttraining, PCAdev) :  
  
    #defining our start time  
    start_time = time.time()  
  
    # Defining our classes  
    class0 = PCAttraining[trainingLabel == 0]  
    class1 = PCAttraining[trainingLabel == 1]  
    class2 = PCAttraining[trainingLabel == 2]  
    class3 = PCAttraining[trainingLabel == 3]  
    class4 = PCAttraining[trainingLabel == 4]  
    class5 = PCAttraining[trainingLabel == 5]  
    class6 = PCAttraining[trainingLabel == 6]  
    class7 = PCAttraining[trainingLabel == 7]  
    class8 = PCAttraining[trainingLabel == 8]  
    class9 = PCAttraining[trainingLabel == 9]  
  
    # Centroids of classes  
    avg0 = np.mean(class0, axis=0)  
    avg1 = np.mean(class1, axis=0)  
    avg2 = np.mean(class2, axis=0)  
    avg3 = np.mean(class3, axis=0)  
    avg4 = np.mean(class4, axis=0)  
    avg5 = np.mean(class5, axis=0)  
    avg6 = np.mean(class6, axis=0)  
    avg7 = np.mean(class7, axis=0)  
    avg8 = np.mean(class8, axis=0)  
    avg9 = np.mean(class9, axis=0)  
  
    avg = [avg0, avg1, avg2, avg3, avg4, avg5, avg6, avg7, avg8, avg9]  
  
    #Compute the learning time  
    learn_time = time.time() - start_time  
    print('\tLearning time : ' + str(learn_time) + ' sec')  
  
    start_time = time.time()  
  
    #We try to guess the classes of our dev images  
    classifierDevLabel = np.zeros(devLabel.shape)  
  
    #For Each image...  
    for i in range(0, devLabel.shape[0], 1):  
  
        squareDist = np.zeros(10)
```

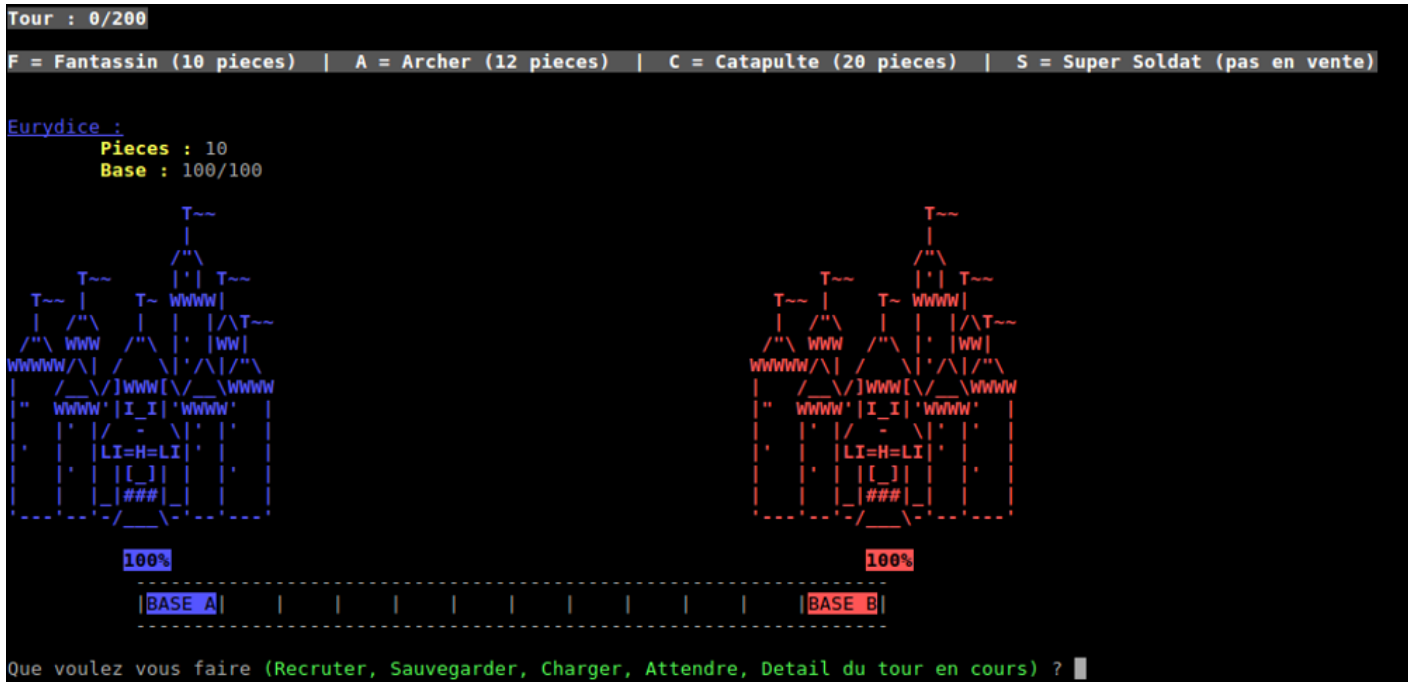


Description :

Project developed with Eurydice Ruggieri for the “Machine Learning” course of Claude Barras at Polytech Paris-Sud. This project is a program that learns how to recognize from low resolution images different types of clothes. The aim of this project was to implement different classifiers and compare their performance.

Console++ Age of War

Dec. 2018 – Jan. 2019

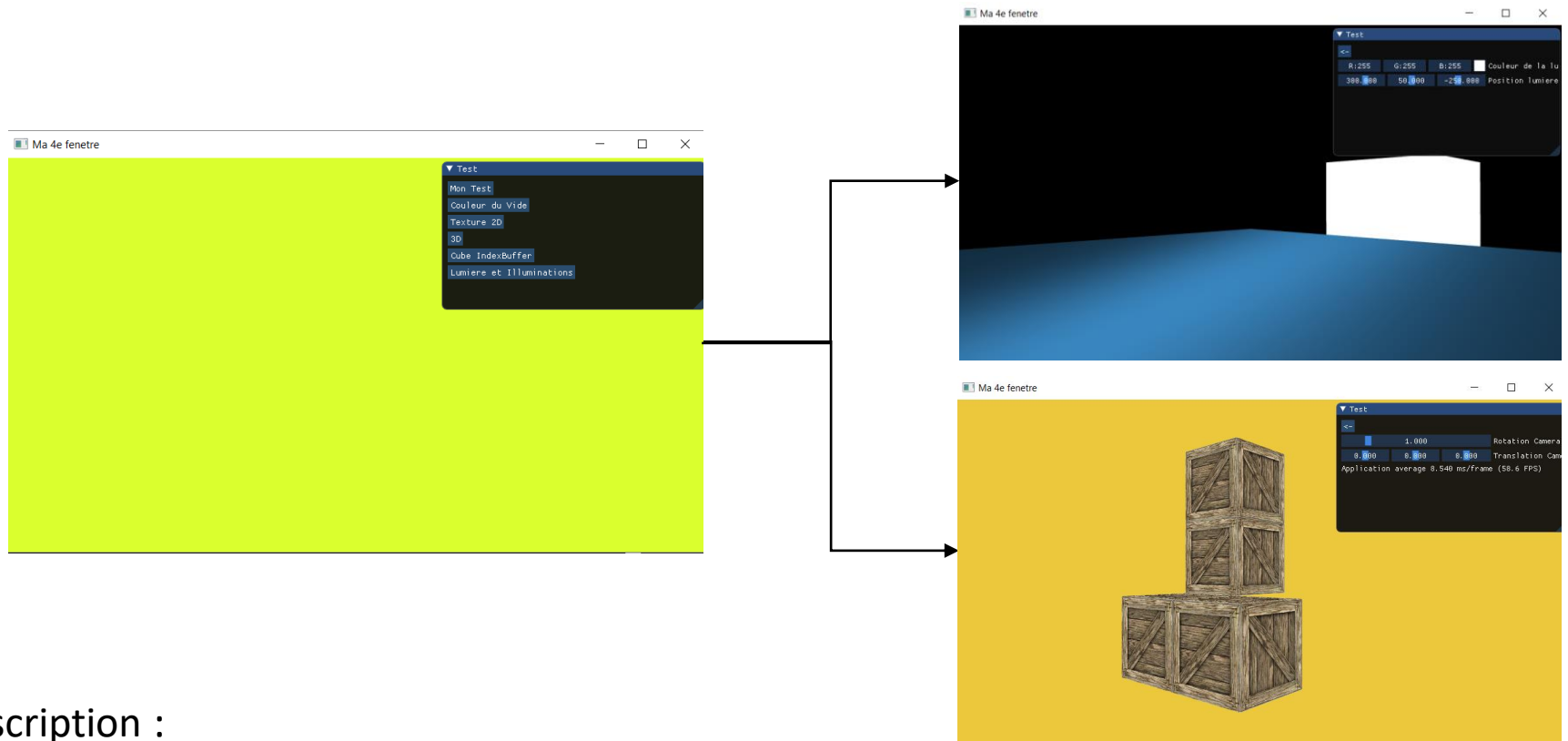


Description :

Project developed with Eurydice Ruggieri for the “Object-Oriented C++” course of Emmanuelle Frenoux at Polytech Paris-Sud. The aim of this project was to create an enhanced version of the Age of War game for the console using C++.

OpenGL Testing Framework

Sep. 2018 – Oct. 2018

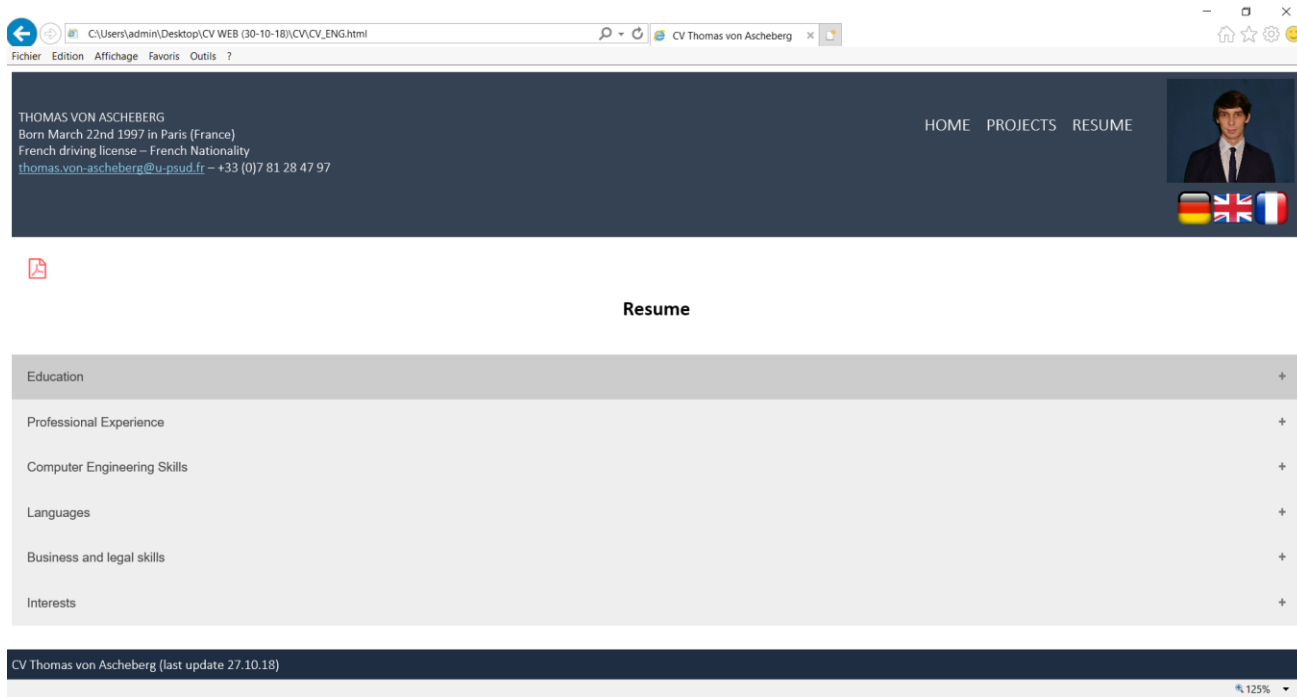


Description :

Personal project developed in C++ during fall 2018. This is an application that allows the user to create small OpenGL applications very easily. This project is a sandbox to test OpenGL code before implementing it in my 3D engine project (Rainbow Engine).

Web Resume

Jul. 2018 – Aug. 2018

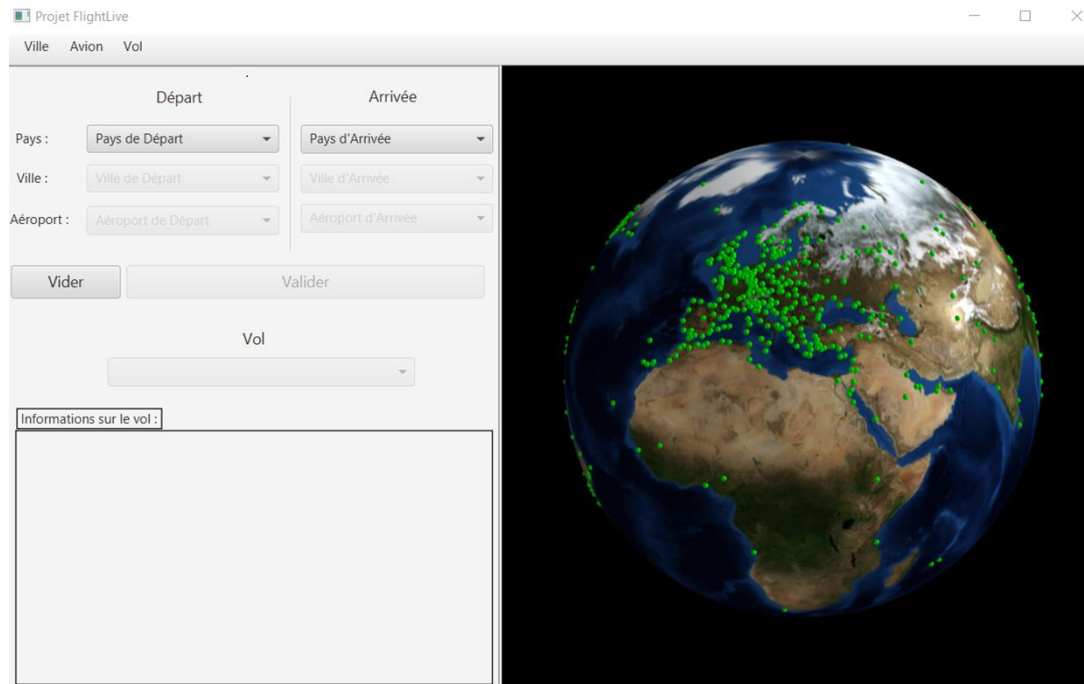


Description :

Personal project developed during summer 2018. This is an interactive Resume/Portfolio. My goal for this project was to deepen my web programming knowledges.

FlightLive

May 2018 – Jun. 2018

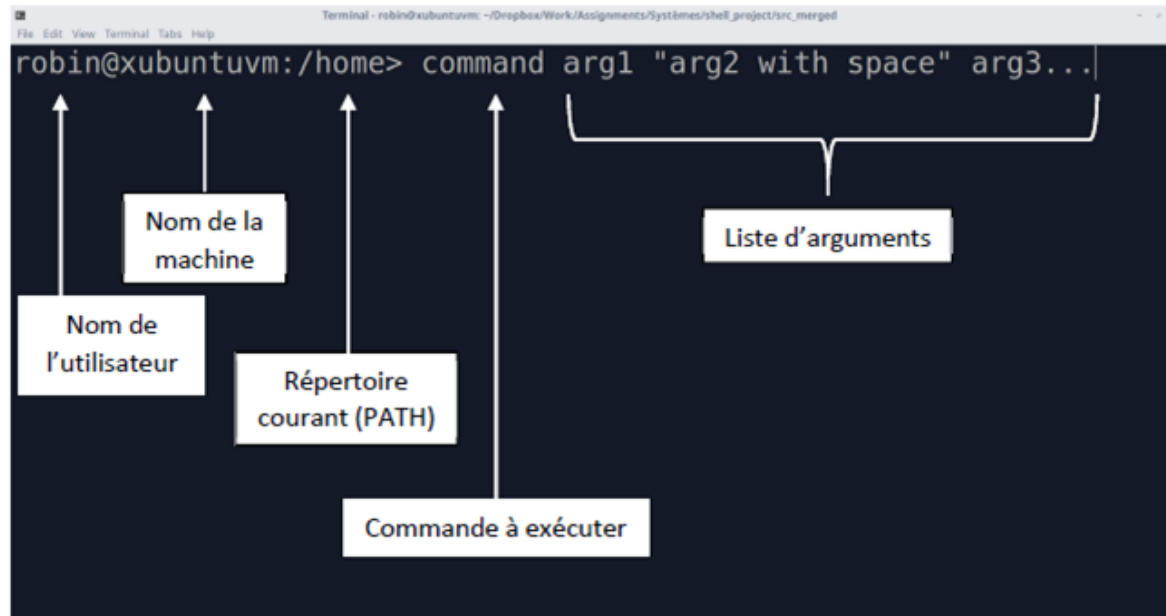


Description :

Project developed in Java/JavaFX with Alexis Proust as part of the "Human-Computer Interaction" course of Cédric Fleury at Polytech Paris-Sud. This application allows to consult in pseudo-real time the list of current flights in the world according to what the user wants.

Unix Shell

May 2018 – Jun. 2018



Description :

Project developed with Robin Malmasson as part of the "Operating Systems" course of Thomas Lavergne at Polytech Paris-Sud. The development was done in C in an Unix environment. The aim of this project was to create a fully fonctionnal Unix Shell with all its specificities (redirections, pipes, etc.)

Matrix ReAnimation

Dec. 2017 – Jan. 2018

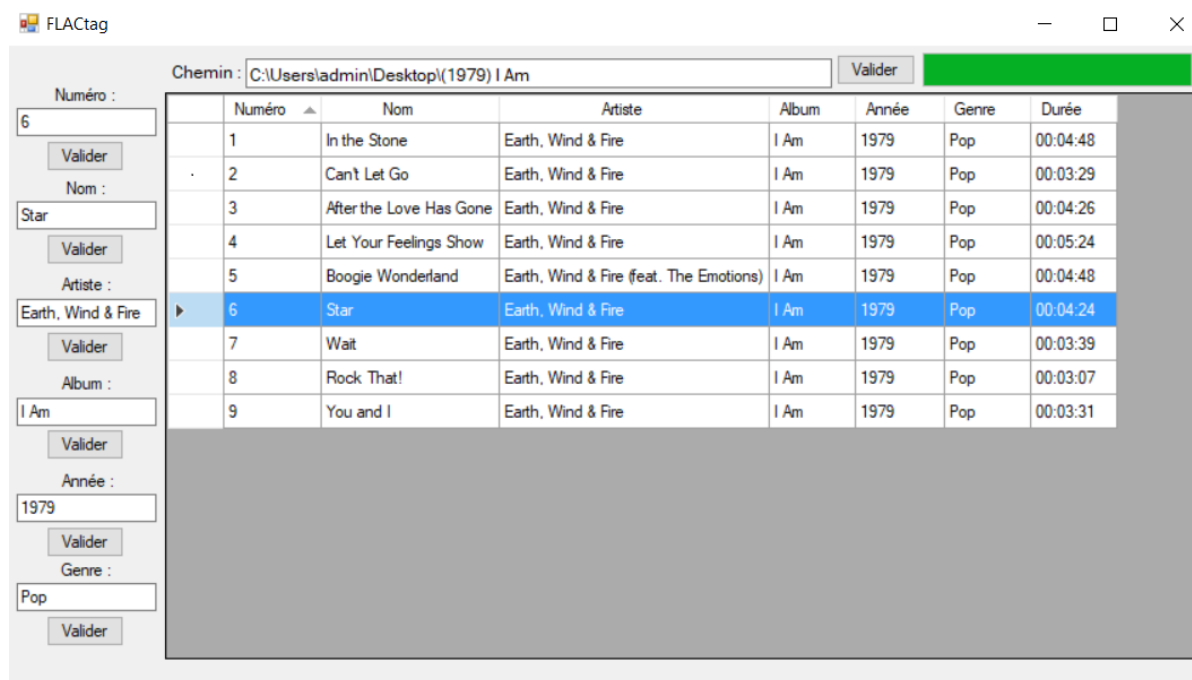


Description :

Project developed with Robin Malmasson and Eurydice Ruggieri as part of the course "Introduction to Computer Graphics" of Tobias Isenberg at Polytech Paris-Sud. The development was done in C++ under Visual Studio 15. In this project we tried to reproduce, as closely as possible, the famous Matrix bullet dodge scene in OpenGL. It was awarded in a competition organized by INRIA.

FlacTag

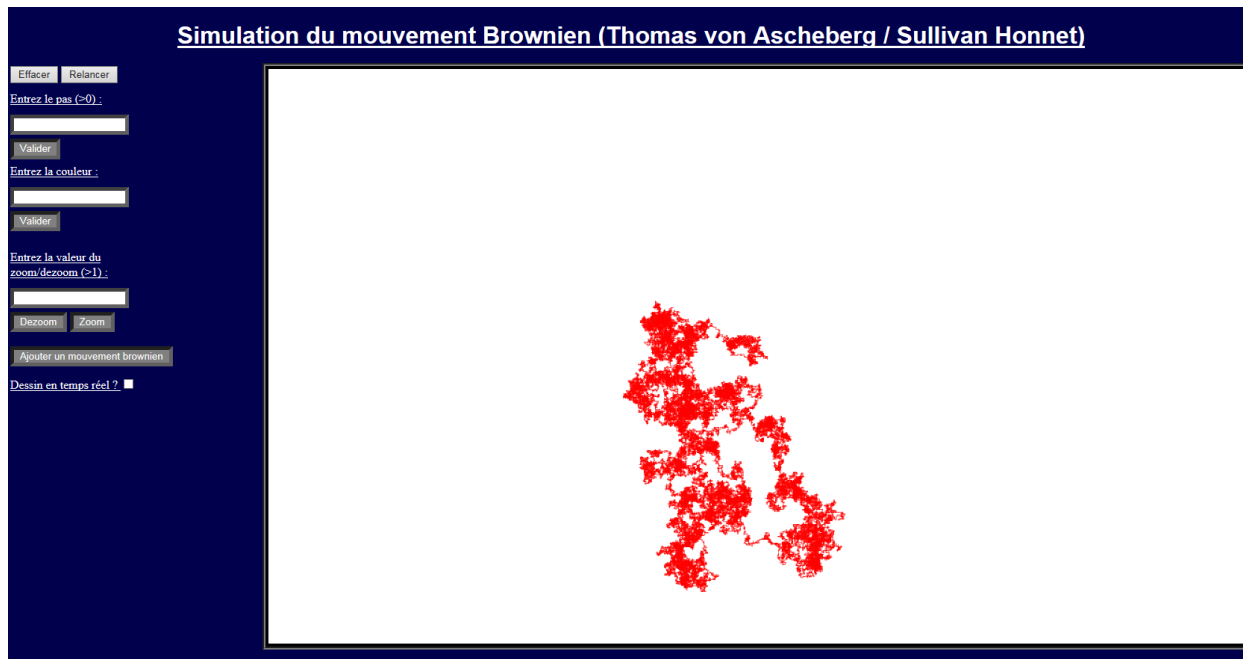
Jun. 2017 – Aug. 2017



Description :

Personal project developed during the summer of 2017. This project is a small utility for processing FLAC files. The main goal of this project was to discover the .NET framework and the Visual Basic programming language. It is inspired by the MP3Tag free software.

Brownian Motion Simulation *Oct. 2016 – Nov. 2016*

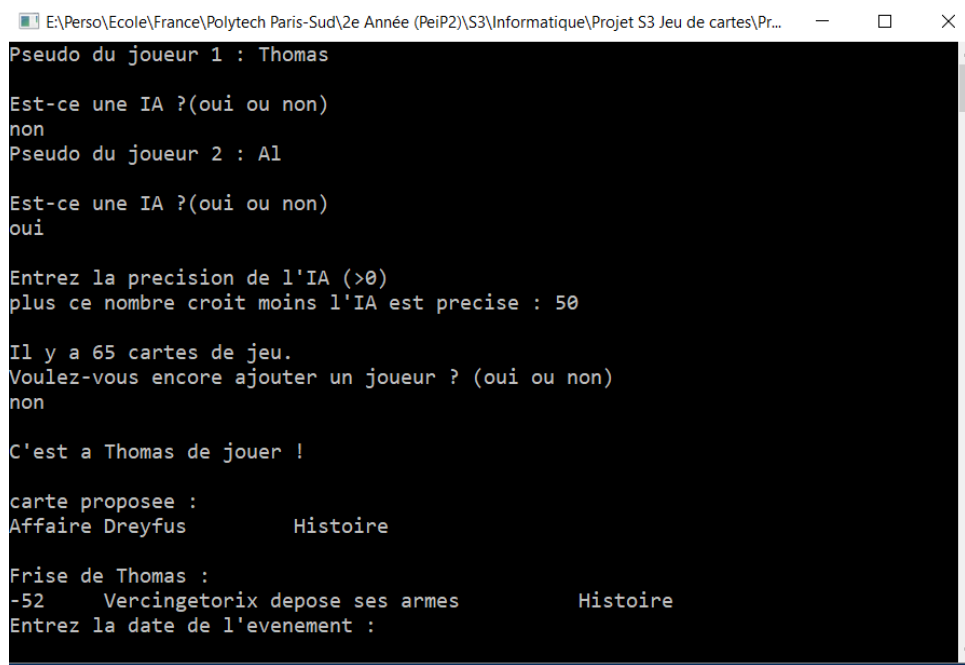


Description :

Project developed with Sullivan Honnet as part of the "Discovery of Web programming" course of Claude Barras at Polytech Paris-Sud. The development was done in HTML5/CSS3/Javascript. The aim of this project was to introduce ourselves to Web programming and its various components.

Console Card Game

Sep. 2016 – Oct. 2016



```
E:\Perso\Ecole\France\Polytech Paris-Sud\2e Année (PeiP2)\S3\Informatique\Projet S3 Jeu de cartes\Pr...
Pseudo du joueur 1 : Thomas
Est-ce une IA ?(oui ou non)
non
Pseudo du joueur 2 : AI
Est-ce une IA ?(oui ou non)
oui
Entrez la precision de l'IA (>0)
plus ce nombre croit moins l'IA est precise : 50
Il y a 65 cartes de jeu.
Voulez-vous encore ajouter un joueur ? (oui ou non)
non
C'est a Thomas de jouer !
carte proposee :
Affaire Dreyfus          Histoire
Frise de Thomas :
-52      Vercingetorix depose ses armes          Histoire
Entrez la date de l'evenement :
```

Description :

Project developed with Sullivan Honnet as part of the “C++ programming” course of Aurélien Max at Polytech Paris-Sud. This project is developed in C++. It is a small card game for the console. The purpose of this project was to improve our C/C++ programming experience.

Python scripts (Web Scrapping)

Jun. 2016 – Jul. 2016

```
Indexation 1001mags V3.py - E:\Perso\programmation\Python\RobotBrowser\Indexation 100...
File Edit Format Run Options Window Help

from robobrowser import *
from datetime import datetime

#Gestion de la date
date=datetime.now()
annee=str(date.year)
mois=str("%02d" % date.month) # (On affiche le mois toujours à 2 chiffres ex: j
jour=str("%02d" % date.day) # De même pour le jour
heure=str(date.hour)+":"+str(date.minute)

date=heure+"\t"+jour+"/"+mois+"/"+annee

#CONSTANTES

N=500 #nombre de fichier XML d'url dans la sitemap
D=1 #Page de départ du sitemap

"""
On cherche à savoir si un fichier de log existe:
si il existe, c'est que ce programme a déjà été lancé aujourd'hui,
on cherche alors à savoir quelle est la dernière page terminée,
pour reprendre de là.
Si le log n'existe pas (File not found) c'est alors que l'on a lancé ce fichier
pour la lere fois aujourd'hui
"""
try :
    file=open("log_"+jour+"-"+mois+".txt","r") #On ouvre le fichier log en mode
    for ligne in file:
        #On avance ligne par ligne
        if "!" in ligne:
            #Si on trouve un ! c'est que l'on a fini une page
            D=D+1
            #On recommencera alors l'indexation à la page suivante
    file.close()
    #on ferme le fichier de log
except FileNotFoundError:
    #Si pas trouvé --) pas de fichier
    log=open("log_"+jour+"-"+mois+".txt","a") #On crée un fichier log

print("Programme lancé à "+date)
log=open("log_"+jour+"-"+mois+".txt","a")
log.write("Programme lancé à "+date+"\n\n")
```

```
*Python 3.5.1 Shell*
File Edit Shell Debug Options Window Help

Python 3.5.1 (v3.5.1:37a07cee5969, Dec 6 2015, 01:38:48) [MSC v.1900 32 bit (In
tel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: E:\Perso\programmation\Python\RobotBrowser\Indexation 1001mags\Indexat
ion 1001mags V3.py
Programme lancé à 16:19 03/11/2018
http://fr.1001mags.com/PDF/xmlesitemap/Xmlesitemap1.xml en cours...

Warning (from warnings module):
  File "C:\Users\admin\AppData\Local\Programs\Python\Python35-32\lib\site-packag
es\bs4\_init_.py", line 166
    markup_type=markup_type))
UserWarning: No parser was explicitly specified, so I'm using the best available
HTML parser for this system ("html.parser"). This usually isn't a problem, but
if you run this code on another system, or in a different virtual environment, i
t may use a different parser and behave differently.

To get rid of this warning, change this:

BeautifulSoup([your markup])

to this:

BeautifulSoup([your markup], "html.parser")

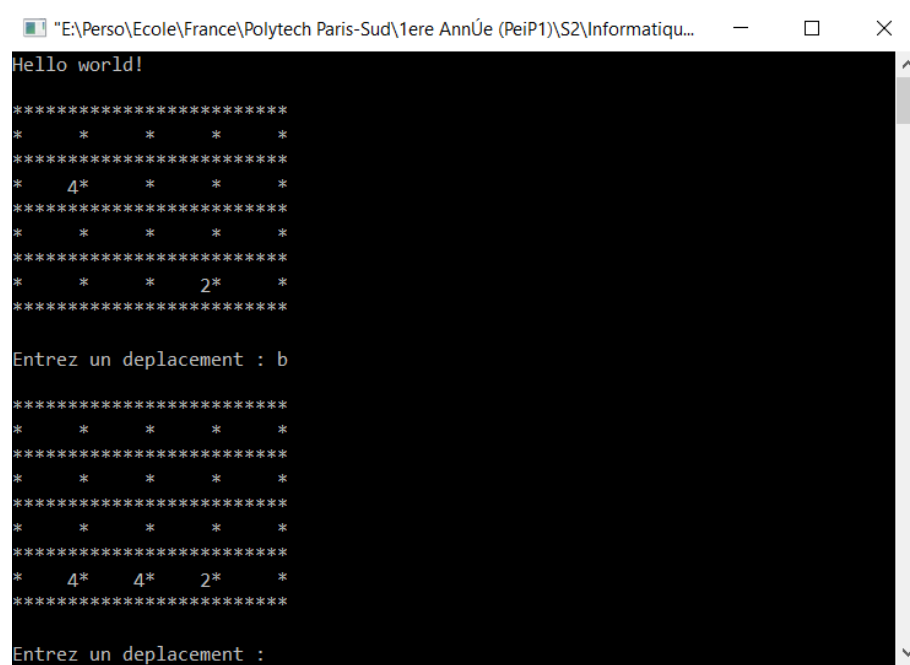
http://fr.1001mags.com
http://fr.1001mags.com/condition-generale-de-vente
http://fr.1001mags.com/contact-redaction
http://fr.1001mags.com/FAQ-foire-au-question
http://fr.1001mags.com/mention-legale
http://fr.1001mags.com/liste-tous-magazines
http://fr.1001mags.com/PDF/actualite
http://fr.1001mags.com/PDF/feminins
http://fr.1001mags.com/PDF/famille
http://fr.1001mags.com/PDF/jeunes
http://fr.1001mags.com/PDF/masculins
```

Description :

Project developed during my internship at 1001mags.com. Those scripts were meant to scrap the web for automatic free newspaper download and to check if any webpage of the website is down.

Console 2048 Game

May 2016 – Jun. 2016



```
"E:\Perso\Ecole\France\Polytech Paris-Sud\1ere Ann e (PeiP1)\S2\Informatiqu...
Hello world!

*****
*   *   *   *   *
*****
*  4*   *   *   *
*****
*   *   *   *   *
*****
*   *   *   2*   *
*****

Entrez un deplacement : b

*****
*   *   *   *   *
*****
*   *   *   *   *
*****
*   *   *   *   *
*****
*  4*   4*   2*   *
*****

Entrez un deplacement :
```

Description :

Project developed with Sullivan Honnet as part of the “C beginner’s programming” course of Frederic Voisin at Polytech Paris-Sud. This project is developed in C. It is a reproduction of the 2048 mobile game but for the console. The main goal of this project was to improve our C programming experience.

Console Chess

Oct. 2015 – Nov. 2015



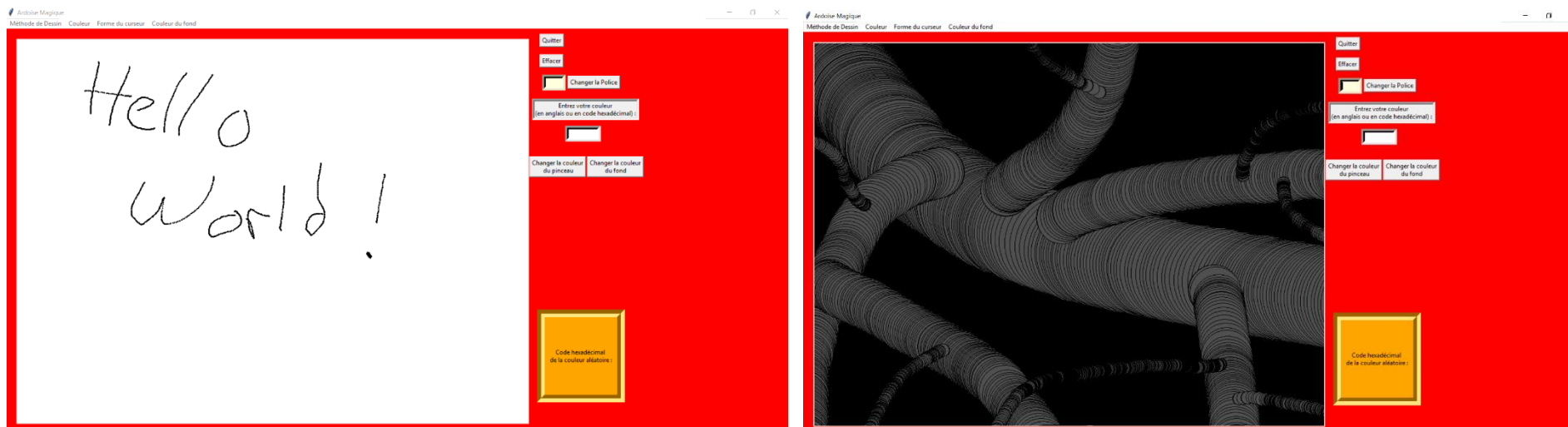
The screenshot shows a console window titled "C:\Users\admin\Desktop\Echecs.exe". The interface is in French and displays a chess board. At the top, it asks for the player names: "MAJ --) Blancs" and "min --) Noirs". Below this is a coordinate system "y\x" with columns 0-7 and rows 0-7. The board is represented by a grid of characters: row 0 has 't1', 'c1', 'f1', 'd', 'r', 'f2', 'c2', 't2'; row 1 has 'p1', 'p2', 'p3', 'p4', 'p5', 'p6', 'p7', 'p8'; row 2 has dots; row 3 has dots; row 4 has dots; row 5 has dots; row 6 has 'P1', 'P2', 'P3', 'P4', 'P5', 'P6', 'P7', 'P8'; row 7 has 'T1', 'C1', 'F1', 'D', 'R', 'F2', 'C2', 'T2'. At the bottom, it prompts "Entrez le couple x y :".

Description :

Personal project developed in C++. This project is a small chess game for the console. My aim for this project was to start learning the C++ programming language.

Python Drawing Board

Jun. 2015 – Aug. 2015

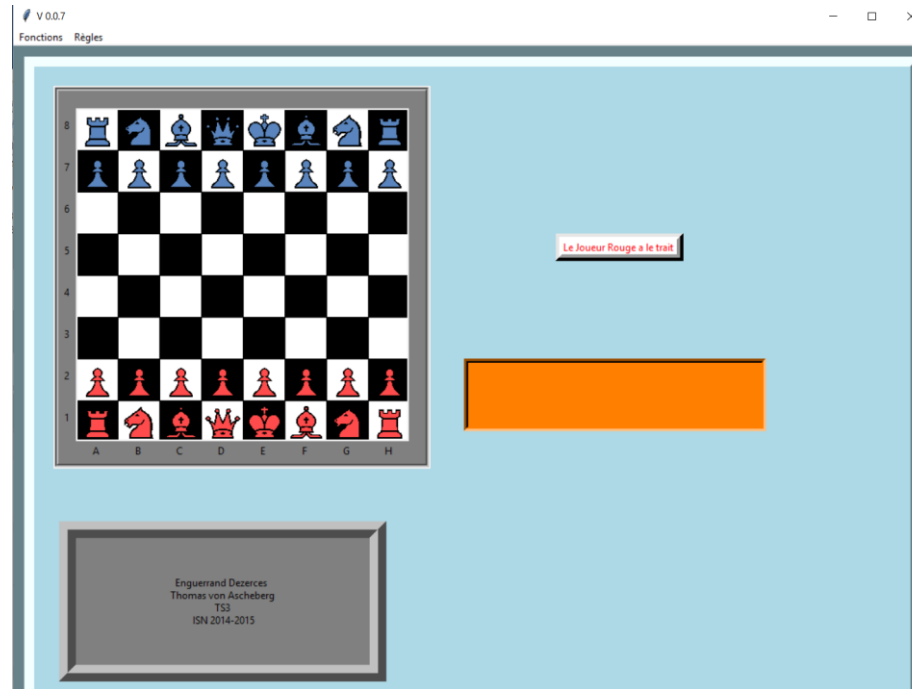


Description :

Personal project developed during the summer of 2015. This project is a small drawing software. The main goal of this project was to test my python skills at the moment and to improve my programming knowledges.

Python Chess

Dec. 2014 – Jun. 2015



Description :

Project developed in High School with Enguerrand Dezerces as part of the "Computer and Digital Sciences" (ISN in French) Baccalaureate exam. This project was my first programming experience. The goal of this project was to program a classic chess game (with all the official rules).