Association 42
96, Boulevard Bessières
75017 Paris
FRANCE

ACADEMIC RESULTS FOR GIOVANNI PIROZZI

I, the undersigned Sophie VIGER, Managing Director of 42 Paris located at 96, Boulevard Bessières, 75017 Paris, FRANCE, hereby certify that:

Giovanni Pirozzi, born on 09 agosto 1999 in Bagno a ripoli (Italia)

obtained the grades detailed below as of 11 dicembre 2025.

This certificate is delivered upon request for all legal intents and purposes.

Selected in: **Ottobre 2024**
Curriculum started on: **18 novembre 2024**
Curriculum ended on: **-**

Founded in 2013, 42 is a worldwide network of ICT schools. We are a non-traditional educator offering high-quality and scalable software engineering education to anyone who wants to learn.

It is our mission to prepare the next generation for the jobs of today and tomorrow. We do so using an innovative educational model, which relies on peer-to-peer learning, project-based and hands-on approach to programming. Our innovative model, allowing individual pace and path, has proven that our students become industry-ready software engineers within 2 to 5 years.

The progression of the student inside the curriculum is represented by its level, over 21.
The current level of the student is: **8.94.**

The 42 curriculum is divided into two halves: the common core and the 42 advanced part. Once students complete the first half (the common core), they have the option to either continue their journey in the 42 advanced part, or conclude their progression and become an alumni at any point during this second part.
The current situation of the student is: **in the Common Core.**
See details below.

Made in Paris, on 11 dicembre 2025

DETAILS

Here is a description of each part of the curriculum and the current position of the student:

<u>The Common Core</u>

The common core of the 42 curriculum represents the minimum set of skills to be ready for a first professional experience. It provides basic and standard coding skills, as well as a fruitful range of soft skills. The delay of the CC is approximately between 1 and 2 years. The following information represent the skills developed during this part of the curriculum and the current progression of the student:

Giovanni Pirozzi : Common core achieved at: **87%.**

Developed skills during the entire common core:

- ***Algorithms & AI:*** Standards algorithms on standards structures: searching, sorting, insertion, deletion, balance, on: arrays, linked lists, trees. State machine and asynchronous management.

- ***Graphics:*** Image management, RGB structure of an image, manipulating areas, drawing into an image, interacting with the window management system and getting user events and inputs from keyboard and mouse, programming with callbacks and event loop.

- ***Group & interpersonal:*** Collaboration, relationships and group management situations, including different kinds of interactions between people (friendly, tensions ...)

- ***Imperative programming:*** Basics of coding in C : the C syntax, variable, loops, conditional branches, functions, recursivity, instructions, calculus and expressions, comparisons operators, standard and advanced types, strings processing, structures, includes and libraries, memory allocation and release, linked lists, trees, the C standard library

- ***Network & system administration:*** Basics of computer networking : IP addresses, subnets, default routing, local network structure, host to host connectivity to network services; Basics of system administration : operating system installation with Linux, setting up security, access, users, storage, installing network services like mail, dns, web server, ...

- ***Object-oriented programming:*** Object programming principles in C++, classes, namespaces, constructors and destructors, memory management in C++, inheritance, abstraction, overloading, templates, standard C++ library types and tools

- ***Rigor:*** The need to fulfill administrative and technical constraints. The need for a wide and deep testing process to eliminate failure.

- ***System programming:*** Classic Unix system interactions : system calls, filesystem access and management, process creation, execution, management; inter-process communications : pipes and signals; device management and ioctl, terminal capabilities; network communication : TCP & UDP sockets, DNS resolution, endianness

- ***Web:*** The client-server architecture involved in the web, role and actions of the web server, role and actions of the web browser; The HTTP protocol; Web technologies involved : HTML, CSS, Javascript, images and videos; Backend language and framework for dynamic websites: one among php, ruby, python, go, javascript, Rails, Symfony, Django, Node, ... ; MVC model; users web services : web sessions, authentification, cookies, search, caddie, backoffice configuration, ... ; Basics of user experience, user interface, and

design.

Details of each validated project in appendix 1.

<u>The 42 Advanced Part</u>

The 42 Advanced offers a choice of path among various ICT specialisations: each student can select the topic(s) she/he wants to develop and improve. This part of the curriculum also contains several professional experiences (internships, part-time jobs, ...).
No projects completed yet

Professional experience: no professional experience yet

Details of the validated projects in appendix 2.

SPECIAL

A student can eventually benefit from special programs or projects valuable for their personal skill set, and thus included in their curriculum. They are mentioned here:

Name	Equivalent workload
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APPENDIX 1

Projects covered during the common core:

Name	Estimated workload	Result	Associated skills	Validation date
Libft	70H	Pass with bonus	Imperative programming, Rigor, Algorithms & AI	30 novembre 2024
ft_printf	55H	Pass	Rigor, Algorithms & AI	17 dicembre 2024
Born2beroot	50H	Pass with bonus	Rigor, Network & system administration	10 gennaio 2025
get_next_line	55H	Pass with bonus	Rigor, Unix, Algorithms & AI	13 gennaio 2025
minitalk	50H	Pass with bonus	Rigor, Unix	17 febbraio 2025
so_long	60H	Pass with bonus	Imperative programming, Graphics	26 febbraio 2025
Exam Rank 02	0H	Pass		27 febbraio 2025
push_swap	50H	Pass with bonus	Imperative programming, Rigor, Unix, Algorithms & AI	05 marzo 2025
Exam Rank 03	0H	Pass		20 marzo 2025
Philosophers	70H	Pass with bonus	Imperative programming, Rigor, Unix	27 marzo 2025
minishell	210H	Pass	Imperative programming, Rigor, Unix	19 maggio 2025
Exam Rank 04	0H	Pass		22 maggio 2025
NetPractice	50H	Pass	Rigor, Network & system administration	04 giugno 2025
CPP Module	22H	Pass	Object-oriented programming, Imperative programming, Rigor	21 luglio 2025

Name	Estimated workload	Result	Associated skills	Validation date
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CPP Module 01	12H	Pass	Object-oriented programming, Imperative programming, Rigor	23 luglio 2025
cub3d	280H	Pass with bonus	Imperative programming, Rigor, Algorithms & AI, Graphics	24 luglio 2025
CPP Module 02	12H	Pass	Object-oriented programming, Imperative programming, Rigor	07 agosto 2025
CPP Module 03	12H	Pass	Object-oriented programming, Imperative programming, Rigor	08 agosto 2025
CPP Module 04	12H	Pass	Object-oriented programming, Imperative programming, Rigor	02 settembre 2025
CPP Module 05	25H	Pass	Object-oriented programming, Imperative programming, Rigor	03 settembre 2025
CPP Module 06	25H	Pass	Object-oriented programming, Imperative programming, Rigor	12 settembre 2025
CPP Module 07	25H	Pass	Object-oriented programming, Imperative programming, Rigor	12 settembre 2025
CPP Module 08	25H	Pass	Object-oriented programming, Imperative programming, Rigor	29 settembre 2025
Exam Rank 05	0H	Pass		24 ottobre 2025
CPP Module 09	40H	Pass	Object-oriented programming, Imperative programming, Rigor	30 ottobre 2025
ft_irc	175H	Pass with bonus	Object-oriented programming, Rigor, Unix, Network & system administration	24 novembre 2025
Inception	150H	Pass with bonus	Rigor, Network & system administration	04 dicembre 2025
Exam Rank 06	0H	Pass		04 dicembre 2025

APPENDIX 2

Projects covered during the 42 advanced:

Name	Estimated workload	Result	Associated skills	Validation date
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Internship and professional experiences				
Company name	Duration	Validation	Skills	Validation date
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APPENDIX 3

Description of each covered project:

Name	Description
Libft	This project is your very first project as a student at 42. You will need to recode a few functions from the C standard library, as well as some other utility functions that you will use throughout your whole curriculum.
ft_printf	This project is pretty straightforward, you have to recode printf. You will learn what is and how to implement variadic functions. Once you validate it, you will reuse this function in your future projects.
Born2beroot	This project aims to introduce you to the wonderful world of virtualization.

get_next_line	Whether it's a file, stdin, or even later a network connection, you'll always need a way to read content line by line. It's time to start working on this function, which will be essential for your future projects.
minitalk	The purpose of this project is to code a small data exchange program using UNIX signals. It is an introductory project for the bigger UNIX projects that will appear later on in the cursus.
so_long	This project is a small 2D game with minilibx. You'll learn about textures, sprites and tiles.
Exam Rank 02	This project will evaluate your abilities and knowledge about programming.
push_swap	This project involves sorting data on a stack, with a limited set of instructions, and using the smallest number of moves. To make this happen, you will have to manipulate various sorting algorithms and choose the most appropriate solution(s) for optimized data sorting.
Exam Rank 03	This project will evaluate your abilities and knowledge about programming.
Philosophers	This project aims to teach concurrent programming, focusing on multithreading and multiprocessing.
minishell	The objective of this project is for you to create a simple shell.
Exam Rank 04	This project will evaluate your abilities and knowledge about programming.
NetPractice	NetPractice is a hands-on networking project featuring 10 progressive levels that teach essential computer networking fundamentals. Through interactive problem-solving, you'll master TCP/IP addressing, subnet masks, default gateways, routing, and OSI layers by troubleshooting and configuring non-functioning network diagrams. This browser-based training provides practical experience in network administration, preparing you for real-world system administration and networking challenges.
CPP Module 00	This first module of C++ is designed to help you understand the specificities of the language when compared to C. Time to dive into Object-Oriented Programming!
CPP Module 01	This module is designed to help you understand memory allocation, references, pointers to members, and the usage of the switch statement in C++.
cub3d	This project is inspired by the world-famous eponymous 90's game, which was the first FPS ever. It will enable you to explore ray-casting. Your goal will be to make a dynamic view inside a maze, in which you'll have to find your way.
CPP Module 02	This module is designed to help you understand ad-hoc polymorphism, function overloading, and orthodox canonical classes in C++.
CPP Module 03	This module is designed to help you understand inheritance in C++.
CPP Module 04	This module is designed to help you understand subtype polymorphism, abstract classes, and interfaces in C++.
CPP Module 05	This module is designed to help you understand try/catch and exceptions in C++.
CPP Module 06	This module is designed to help you understand the different types of casting in C++.
CPP Module 07	This module is designed to help you understand templates in C++.
CPP Module 08	This module is designed to help you understand templated containers, iterators, and algorithms in C++.
Exam Rank 05	This project will evaluate your abilities and knowledge about programming.
CPP Module 09	This module is designed to help you understand containers in C++.
ft_irc	Create your own IRC server in C++98, compatible with a standard IRC client for the required features.
Inception	Broaden your system administration skills by working with Docker. In this project, you'll set up a complete infrastructure using Docker Compose, creating and managing multiple containerized services including NGINX with SSL/TLS, WordPress with php-fpm, and MariaDB. You'll gain hands-on experience with containerization, networking, volume management, and secure web service deployment within your own personal virtual machine.
Exam Rank 06	This project will evaluate your abilities and knowledge about programming.