AI Generation

Impact Report

AI Generation Curriculum Program

Course 1: Introduction to Artificial Intelligence (2024–2026)

UiPath Foundation

IN COLLABORATION WITH

App Inventor Foundation

Contents

Executive Summary

This Impact Report presents findings from four cohorts of the course 1 "AI Generation" AI literacy curriculum, a joint initiative by the UiPath Foundation and the App Inventor Foundation. The program engaged a total of 333 Romanian high school students from underprivileged backgrounds, aiming to enhance foundational competencies in Artificial Intelligence (AI), promote ethical awareness, and cultivate future-ready skills. The curriculum aligns with the UNESCO AI Competency Framework for Students[1] and reflects UNESCO's ethical guidelines[2] while developing human-centered and inclusive AI literacy. Surveys completed by 201 of the participating students conducted before, during, and after the program demonstrated strong student engagement and statistically significant increases in AI knowledge and self-efficacy.

Average attendance across all 333 students was 80%, and 88% among the evaluation group. From pretest to posttest, AI knowledge scores rose by 5% and AI confidence by 10%, both statistically significant. No significant differences in outcomes were found by gender, rural or urban residence, or school type, confirming the program's inclusive reach.

KEY RESULTS

- **97%** of students felt they learned something new.
- **99%** of students feel they have the ability to learn AI concepts.
- **94%** of students feel they have the ability to implement AI projects.
- **90%** of students felt they have the ability to explain Artificial Intelligence concepts to their peers.
- **89%** of students believe that AI impacts their lives, which reveals a high level of AI awareness.

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[1] Miao, F., Shiohira, K., & Lao, N. (2024). *AI competency framework for students*. United Nations Educational, Scientific and Cultural Organization. https://unesdoc.unesco.org/ark:/48223/pf0000391105

[2] UNESCO. (2025). *Recommendation on the ethics of artificial intelligence*. United Nations Educational, Scientific and Cultural Organization. https://www.unesco.org/en/artificial-intelligence/recommendation-ethics

1 Curriculum Overview

The "AI Generation" curriculum course 1 is a secondary school-level AI curriculum grounded in a human-centred and computational action approach.[3] It is built upon the four core values and ten principles from UNESCO's Recommendation on the Ethics of Artificial Intelligence.[4] The curriculum emphasizes the intersection of AI with key humanistic principles such as inclusion and equity, the use of AI to address social, personal, and environmental challenges, and a commitment to sustainability and reducing environmental impact.

The curriculum introduces core AI concepts while providing students with opportunities to experiment with AI tools and apply them creatively for personal expression. The course implementation spanned 14 weeks and included three instructional modules followed by a Capstone project, each aligned with the first three aspects of UNESCO's AI Competency Framework for Students:

MODULE 1	MODULE 2	MODULE 3	CAPSTONE
Human-Centered Mindset	**Ethics of AI**	**AI Foundations**	**Teaching AI to Your Community**
4 weeks	4 weeks	4 weeks	2 weeks

Each core module involved four weeks of asynchronous instruction, totaling approximately 35 hours (1.5 hours of classroom learning and one hour of homework per week). Students engaged in iterative problem-solving using AI to address personally relevant challenges, culminating in the Capstone project where students designed and taught AI lessons to peers and community members. The curriculum aimed to develop foundational AI literacy, critical thinking, communication, problem-solving, and collaboration skills.

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[3] Tissenbaum, M., Sheldon, J., & Abelson, H. (2019). From computational thinking to computational action. *Communications of the ACM*, 62(3), 34–36. https://doi.org/10.1145/3265747

[4] UNESCO. (2022). *Recommendation on the Ethics of Artificial Intelligence*. United Nations Educational, Scientific and Cultural Organization. https://unesdoc.unesco.org/ark:/48223/pf0000381137

2 Student Demographics

A total of 333 students participated in the “AI Generation” curriculum program. This represents four cohorts of students, who joined the course between 2024 and 2026.

The participants are part of UiPath Foundation’s Own Your Path program, where high schoolers develop 21st-century skills, enabling them to graduate better equipped to navigate an uncertain and ever-changing world. Own Your Path helps students from rural areas and small towns in Romania access quality educational resources through the program’s digital platform.

The students engaged with the curriculum online in synchronous sessions facilitated by UiPath volunteers (with and without technical background). All students were provided tablets with internet access for the program.

201 students provided the data necessary for the elaboration of this report, a response rate of 60.4%. The gender distribution of these students consisted of 63% female and 37% male students. Participants ranged in age from 15 to 20 years old, with a median age of 16. In terms of grade level, 51% of students were in Grade 9, with 16% in Grade 10, 1% in Grade 11, and 32% in Grade 12. Course performance was 70% or higher for all grades, but was lowest in Grade 10 (see figure 1).

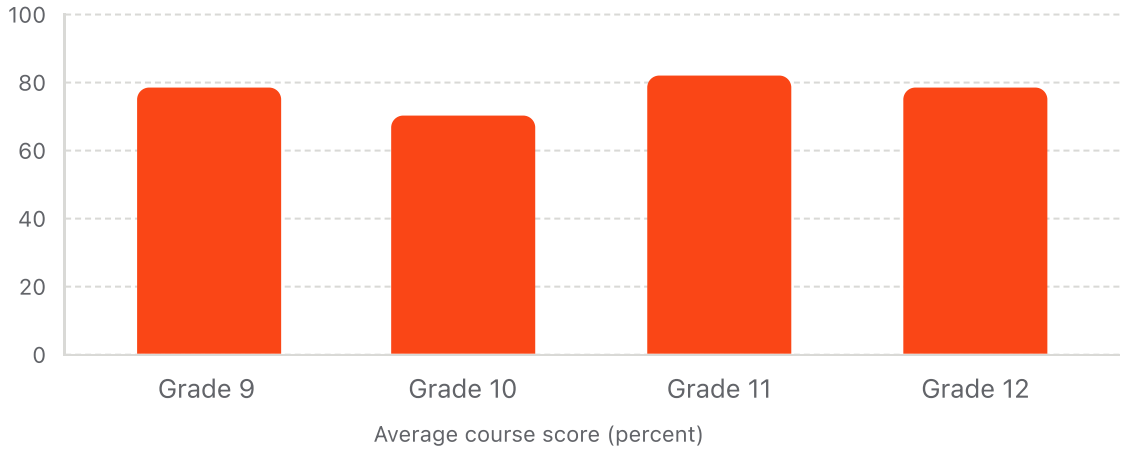

Figure 1: Course performance by grade (percent)

Students attended various types of secondary schools: 25% were enrolled in National Colleges, 28% in Theoretical High Schools, and 47% in Technological or Vocational High Schools. A majority of students (79%) resided in rural areas, while 21% came from urban settings.

Regarding family structures, 78% of students lived with their nuclear families, 19% in single-parent households, 2% with extended family, and 1% with foster families. Thirty percent of participants's families have no official income, and the average monthly income of remaining participants was RON286 ($64) per supported family member or RON1,019 ($227) per household, not including students' scholarships or state child allowances. This is significantly below the national average.

3 Course Feedback

Student feedback collected through end-of-module and post-program surveys indicated high levels of satisfaction and engagement with the “AI Generation” Level 1 curriculum. The average attendance rate among all 333 students was 80%, a strong indicator of sustained interest and commitment throughout the 14-week extracurricular program. The participation rate was even higher among the evaluation group of 201 students at 88%, underscoring a high degree of consistency in voluntary student involvement. Overall, students found the course accessible, relevant, and enjoyable across all three instructional modules.

3.1 Curriculum Accessibility and Student Perception

When students were asked to rate each module through a survey, the median response was consistently “Great,” the highest rating available on the Likert scale. Students particularly appreciated the hands-on nature of the content, the collaborative nature of assignments, the clarity of instruction, and the opportunity to explore AI in a way that was personally meaningful. While the perceived difficulty increased slightly with each successive module, particularly Module 3, students continued to rate their experience positively.

MODULE LEARNING PERCEPTION

Module 1	Module 2	Module 3
97%	97%	98%
learned something new	learned something new	learned something new

MODULE DIFFICULTY PERCEPTION

Module 1	Module 2	Module 3
98%	98%	92%
easy to understand	easy to understand	easy to understand

When asked what students appreciated about the course, responses included learning new things about AI, appreciation of group work and learning opportunities in teams, the debates held in class and the ability to freely express their opinions, and the atmosphere created by the moderators.

Written student feedback revealed that several elements of the curriculum were particularly impactful in driving engagement and deep learning. Among the most appreciated aspects were hands-on AI creation, collaborative group work, in-class debates, and opportunities for personal expression. These components not only helped students grasp technical concepts but also fostered a sense of agency and belonging in a subject area often perceived as exclusive or inaccessible.

BOX 1: STUDENT FEEDBACK

Sample student responses: What did you appreciate about this course?

"Every meeting was unique and I learned new things, but I liked it most when we worked in groups and had the chance to talk more with each other."

"What I liked most was how easy the information was to digest, through the sorting games and interesting articles."

"What I liked most were the debates, the interactive discussions where we got to know each other better and saw how each person thinks and what perspective they take."

"[The course] uses examples from our everyday life and the teachers talk with us like some colleagues of our age, which is super cool."

"My favorite moment was at the end, when I created the little robot, because I saw firsthand how everything I learned came to life and could be used practically."

"What I liked most was that I learned about AI, what it is, what it is based on and how it compares to human intelligence."

These reflections underscore the program's success in cultivating not just AI skills, but also ethical awareness, self-confidence, and social-emotional growth.

3.2 Knowledge and Confidence Assessment Results

Participants were given a pretest and a posttest, which measured both their AI knowledge and AI confidence. An overall grade for AI knowledge and AI confidence was calculated for each of these metrics on the pretest and the posttest. AI knowledge was measured through a series of scored items (binary grading, correct/incorrect), while AI confidence was measured through Likert scale questions related to interest and confidence in using and building AI for community impact. Likert scale questions had responses with values of 0 - 3, which were converted to an overall confidence score.

A paired-sample t-test found significant gains overall from the pretest to the posttest on both AI knowledge ($p = .0058$) and AI confidence ($p < .0001$). On average, students gained 5% in AI knowledge, and 10% in AI confidence (see Figure 2). While the standard deviation of scores increased in AI knowledge from 18.67 on the pretest to 22.70 on the posttest, the standard deviation of confidence scores decreased from 14.78 to 10.34.

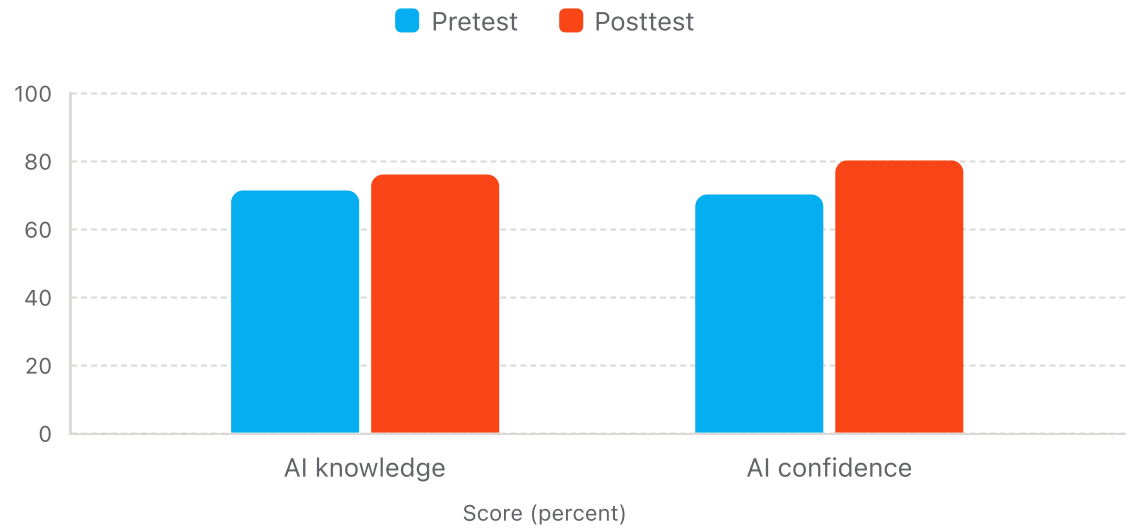

Figure 2: Overall changes in AI knowledge and AI confidence, pretest to posttest (percent score)

In addition, each of the three main modules concluded with a 20-point knowledge assessment. The performance on these assessments was:

MODULE 1	MODULE 2	MODULE 3
Average score	Average score	Average score
86%	**74%**	**72%**
SD 15%	SD 19%	SD 17%

The fairly consistent standard deviations suggest well-balanced assessments in differentiating student understanding despite a variation in difficulty across modules.

While the percentage of female program participants was high (63%), no significant performance differences were found in pre and post tests, AI confidence, or module test performance between male and female students. This finding reinforces the success of the program's inclusivity goal, and suggests the program is successful in engaging students across gender lines.

No significant differences in change in AI knowledge, change in AI confidence, or module test performance were found based on whether students lived in urban or rural environments. However, in terms of average performance, students in rural areas were able to increase their performance and confidence more than students in urban areas, resulting in rural students slightly outperforming their urban counterparts on both the module tests and the posttests (see Figure 3).

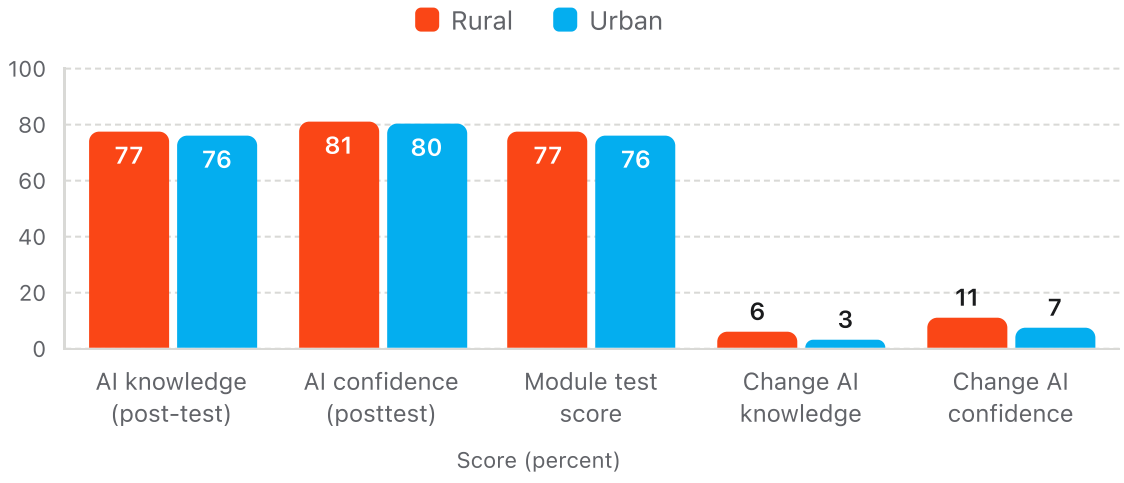

Figure 3: Performance by location density – rural/urban (percent score)

No significant correlations were found based on school type for any of the outcome metrics, indicating that program participants enrolled in technical or vocational programs performed similarly to students enrolled in national colleges or theoretical high schools. However, AI knowledge gains were highest for students enrolled in technical or vocational high schools, while confidence scores increased the most for students enrolled in National Colleges (see Figure 4).

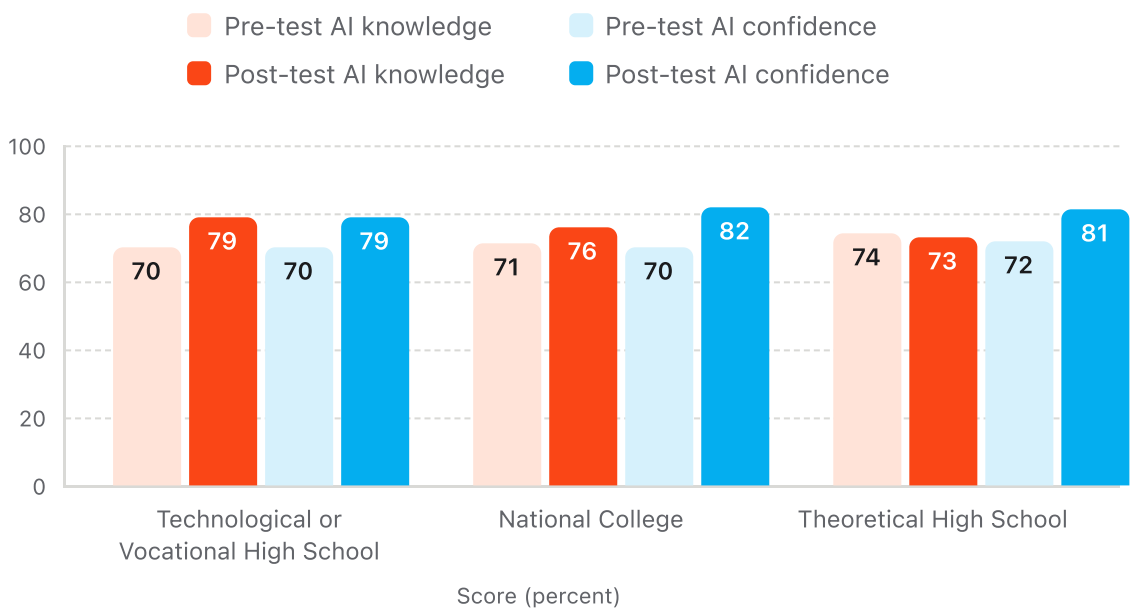

Figure 4: Pre and post test performance by school type (percent score)

3.3 Learning Outcomes and Attitudinal Shifts

Pre- and post- Likert surveys were administered to collect data on change in student self-efficacy in AI, and their perceptions of and attitudes towards AI. The Likert-based pre- and post-program surveys demonstrated perceived improvements in self-efficacy and knowledge in AI, as well as overall improvements in problem-solving and collaboration skills. The measures with the highest changes from the pre- to the post- surveys were the percent of students with confidence in their abilities to explain AI to others (+28%), their ability to implement AI projects (+18%), and their problem-solving abilities (+16%) (see Table below).

STATEMENT	PERCENT AGREED: PRETEST	PERCENT AGREED: POSTTEST	CHANGE
I find AI interesting.	95.83	99.34	+3.50
I fear what AI can do.	60.42	66.78	+6.36
I have the ability to learn AI concepts.	93.15	99.00	+5.85
I have the ability to implement AI projects.	76.19	94.35	+18.16
I have the ability to explain AI concepts to my colleagues.	61.90	90.03	+28.13
I am good at solving problems.	79.17	95.02	+15.85
I collaborate well with others.	92.26	96.68	+4.42

In the posttest, 98% students felt they were successful in the course, and 97% of students were proud of what they had achieved in the Capstone project. Additionally, student's awareness of the impact of AI on their lives increased. The percentage of students who felt that AI impacted their lives "very much" or "moderately" increased from 73% on the pretest to 89% on the posttest, with an 18% increase in the number of students agreeing that AI impacted their lives "very much" (see Figure 6).

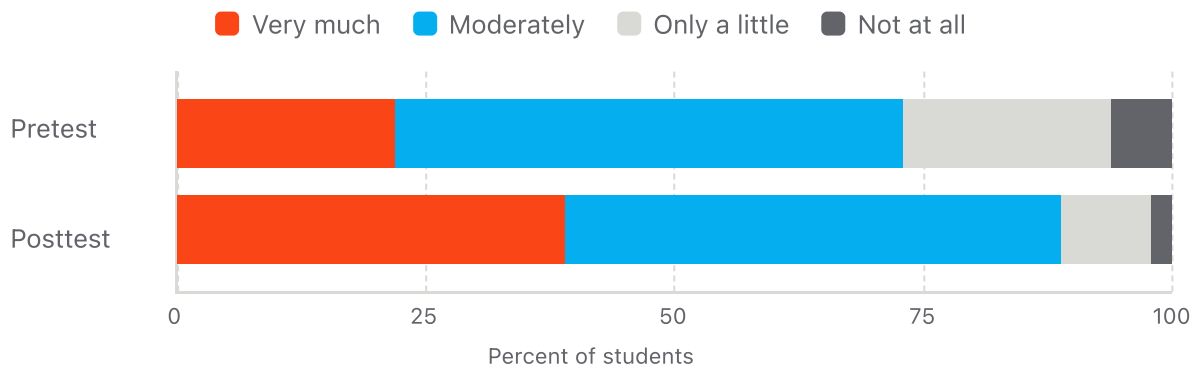

Figure 6: Distribution of student responses: AI impact on their lives

Students were also asked to define AI in their own words before and after the course. While some students entered the course with an understanding of AI, before the course students were likely to define AI in terms of its uses, and also expressed some misunderstandings about its capacities. After the course, student definitions of AI highlighted the role of data and algorithms in creating AI, as well as its connection to human intelligence and its foundations in human thinking and creativity.

Defining Artificial Intelligence

SELECTED QUOTES FROM BEFORE THE COURSE

"In short, AI is like a robotic baby that learns from a certain set of data and if it makes a mistake it will be punished."

"I believe that artificial intelligence is a physical or virtual (online) robot, which is created by humans and is able to solve a problem in a few moments or give a recommendation of a book, music or movie and do many other things."

"A technology capable of providing information instantly, at any time, of simulating different concepts and many others, far beyond human intelligence, which is becoming more and more powerful and useful to mankind."

"Artificial Intelligence represents human intelligence that robots interpret."

"I would define Artificial Intelligence as a brain, unable to feel or perceive emotions, but which continues to learn and store all the information that is offered to it."

"AI from my point of view is defined as a virtual robot programmed by us to perform certain tasks to make our lives easier."

"The future of mankind and the most useful tool to ease the work of mankind in many fields."

SELECTED QUOTES FROM AFTER THE COURSE

"Data + Algorithm + Intelligent Output = Artificial Intelligence" (course definition)

"Artificial intelligence is the ability of a system to simulate human intelligence. This involves using algorithms to interpret data, learn from it, and take decisions or actions accordingly."

"Artificial intelligence is the simulation of human cognitive processes by machines, especially computer systems."

"Artificial intelligence is a program that can help the world and people in many ways."

"A source of critical information based on the logical and creative thinking of people."

"AI is a data-driven mechanism that can help you with any problem, although there is no guarantee that it is always completely correct."

"Artificial Intelligence represents the ability of computer systems to help people perform certain activities, such as solving problems. It can carry out tasks without direct human intervention."

"Artificial intelligence is a kind of intelligence generated on certain devices but which at its core is something created by humans."

4 Conclusion

The “AI Generation” curriculum was shown to enhance student’s understanding of AI as well as their confidence in AI topics. Students praised the program for its collaborative learning environments and activities, and course findings suggest the course supported traditionally-underserved Romanian high school students to improve their ethical and applied understanding of emerging technologies. Students consistently rated the course as valuable—both in terms of content and delivery—and demonstrated meaningful gains in AI knowledge and AI confidence.

Beyond the overall gains in knowledge and confidence, the results point to the program's success in reaching a genuinely underserved population without compromising outcomes: the absence of significant differences by gender, urban/rural setting, or school type indicates that the curriculum is equally effective across the diverse backgrounds represented in the Own Your Path program. Combined with near-universal positive feedback on course accessibility, these findings support AI Generation as a scalable and equitable model for AI literacy education, with strong potential for continued expansion.

Partner organizations

UiPath Foundation

The UiPath Foundation is a nonprofit organization whose mission is to change the trajectory of children living in underserved communities through long-term personalized support and innovative technology-enabled education. The Foundation's programs help children develop essential skills such as numeracy, literacy, digital competencies, and English language proficiency. Children enrolled in these programs receive a monthly scholarship, internet-connected devices, and comprehensive support for their basic, medical, and psychological needs — all contributing to a reduction in their families' economic vulnerability. Through both in-person and online educational and community experiences, participants build communication skills, self-confidence, and resilience. The organization offers children the opportunity to gain future-ready competencies and the confidence they need to succeed — in school and beyond.

App Inventor Foundation

App Inventor is a 501(c)(3) nonprofit established by professors and engineers from Massachusetts Institute of Technology (MIT) and Google. Its mission is to empower students to become problem-solvers who create meaningful technologies that can transform their lives and uplift their communities. Since its inception in 2007, the App Inventor project has reached over 30 million learners worldwide, who have collectively built more than 120 million mobile apps. Grounded in the principles of constructionism and computational action, App Inventor emphasizes learning through building real-world solutions that matter to students and their communities. App Inventor works to expand global access to computing education through its free and open source blocks-based coding platform, curriculum development and teacher training, and thought leadership in AI education.

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