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HACKATHON
Implementation report
Prijedor
12.05.-14.05.2022.

In Prijedor, in the period 12-14.05.2022. within the VIRAL project, the student competition "Hackathon, 2022" was held. This competition brought together teams from universities in B&H and Montenegro. Teams consisted of students of agriculture, electrical engineering and natural sciences and mathematics, whose task was to develop software and hardware solutions to the given problems in the field of agricultural production within a limited time. "Hackathon" is an informal form of student education, and this time they were joined by some of the high school students from Prijedor. To solve a specific agricultural problem, 24 competitors had 48 hours.

At the very beginning, the participants were addressed by the project coordinator Miljan Cvetković (Figure 1), who referred to the importance of this competition and solving this year's problem, regulating the conditions of production indoors.



"Our producers are increasingly deciding to produce indoors. Vegetable production predominates in greenhouses, but fruit growers are also opting for it. Any contribution that would facilitate or improve indoor production is a serious challenge for these young people. " In front of the Ministry of Agriculture, the gathered were greeted by Goran Bursać (Figure 2), Assistant Minister. "The goal of every technology is to reduce production costs, increase yields, lead to higher profitability of production and certainly that agriculture is a training ground where such things should happen." said Goran



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Bursac, Assistant Minister of Agriculture, Forestry and Water Management. On behalf of the host, the guests were greeted by Goran Rodić (picture 3).



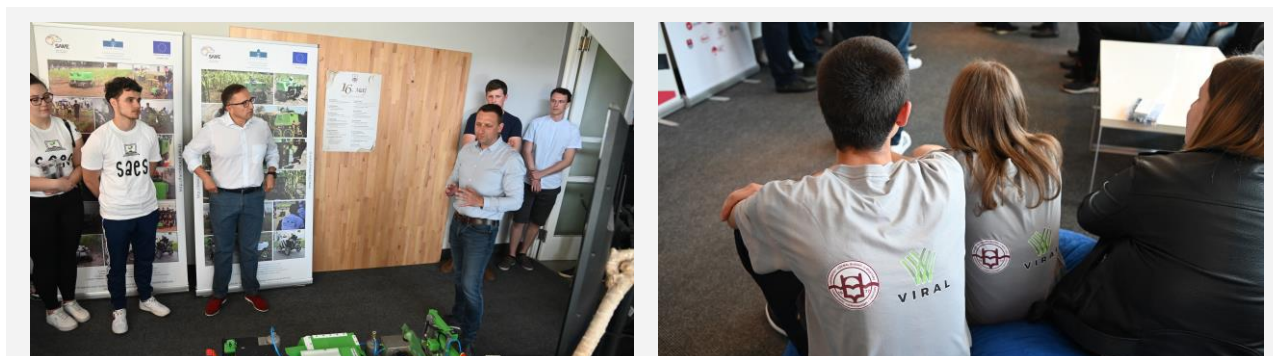
Representatives of the competitors also gave statements to the media, expressing their views on what such a competition means to them and how much their contribution to the improvement of agricultural production can be (Figures 4-5).



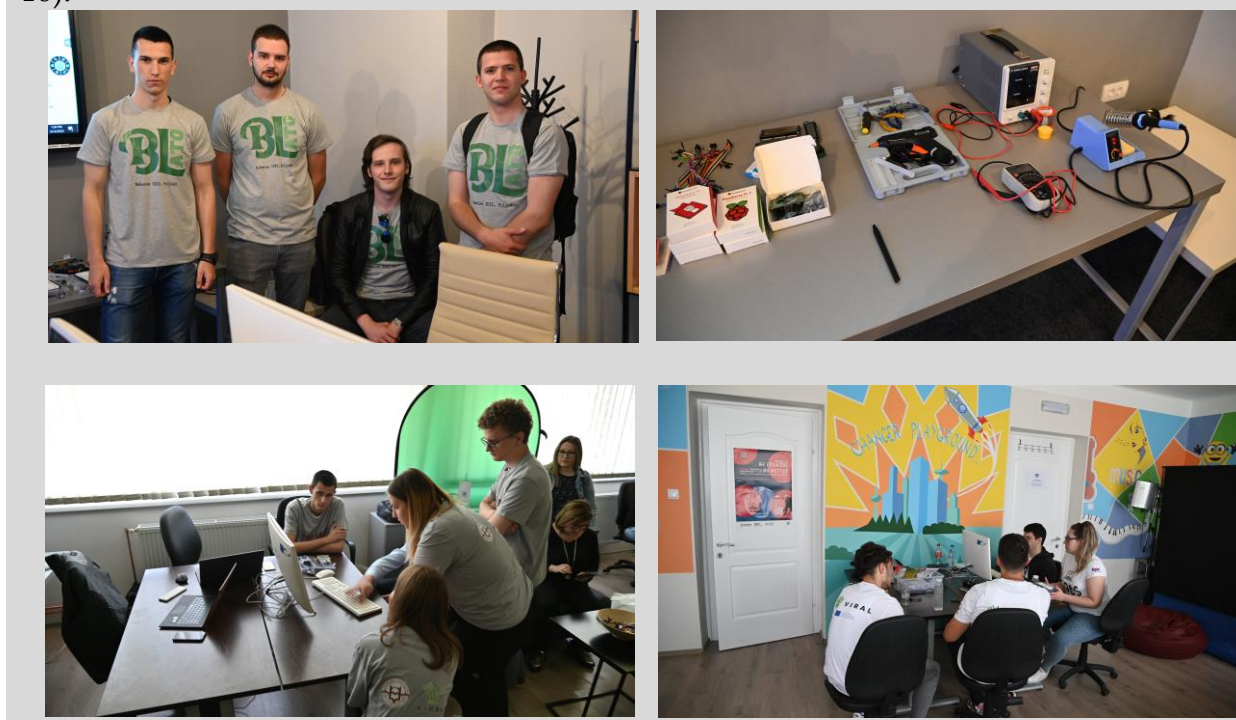
Goran Rodić introduced the participants to the way of using the premises of "PREDA" and the contents that are available to them during the hackathon (Figure 6). Miljan Cvetković introduced the participants to the VIRAL project and the importance of introducing new technologies in agricultural production (Figure 7). Drago Gverić presented the rules of hackathon, the way of working with special emphasis on the evaluation of the solutions themselves, which will be the end result of the work (Figure 8). Mirko Jokić and Prof. dr Vida Todorović gave the participants additional explanations about the problem that was the subject of work on the hackathon.



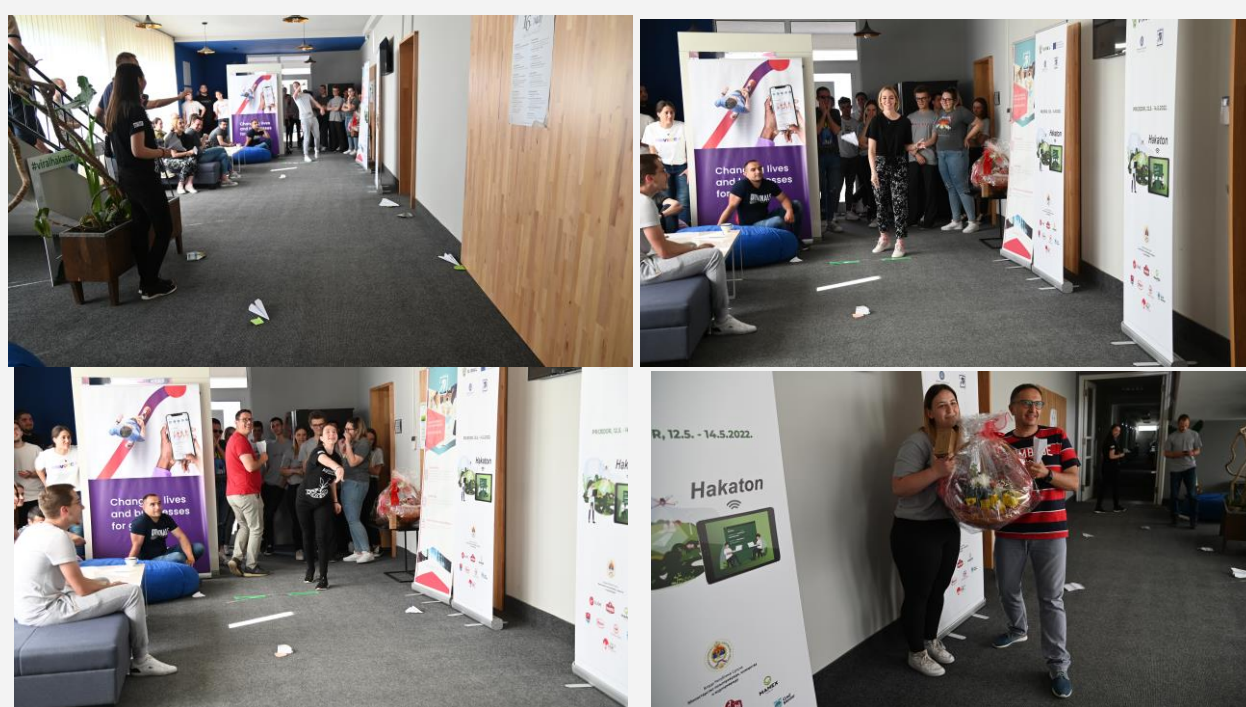
Before the very beginning of the hackathon, the participants were introduced to the work of students of the Faculty of Agriculture from Ljubljana who deal with robotics. Prof. dr Yuri Rakun presented many years of work in the field of robotics and a special competition in the hackathon format, which is based on the participation of specialized robots developed by students. After the presentation, the students demonstrated the work of a robot developed at their faculty (Figures 11-12).



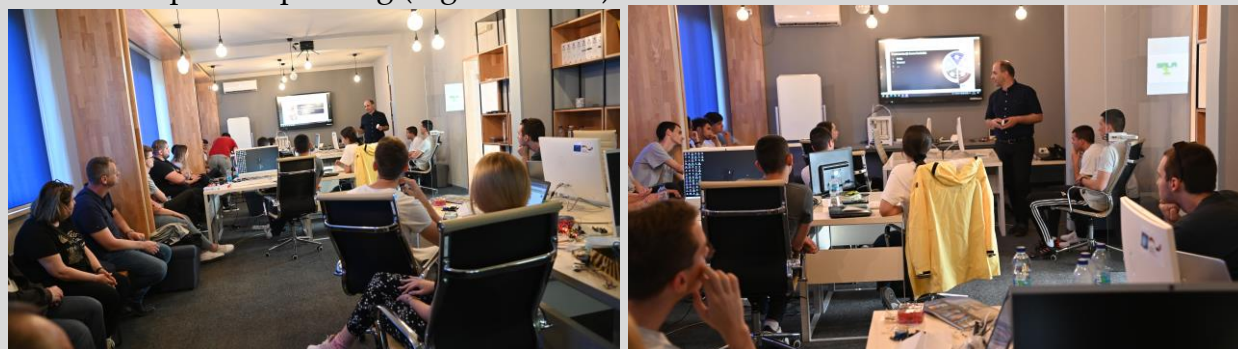
After the lecture, the competitors were accommodated in two working rooms in which they had all the necessary working conditions: desks with computers and a large amount of equipment that was available to them during the work. Participants also had at their disposal number of mentors who were available for most of the hackathon (Figures 13-16).



During the hackathon, a prize game in throwing paper planes was held. The main prize was a gift from one of sponsors of the hackathon - company "Bambi" in the form of a basket full of company products (Figures 17-20).



In order to better present their solutions, a lecture was given to the students on the topic of successful public presentation. The lecture was given by Miloš Todorović, an expert in the field of public speaking (Figures 21-22).



A five-member jury consisting of Semina Hadžiabulić, Aljo Mujčić, Đordje Savić, Mladen Zovko and Miroslav Nedeljković determined the way of evaluating the solutions created within the project. The jury first visited the tables of all teams, in order to see on the spot the hardware part made in response to the given problem (Figures 23-28), and then the representative of each team in the form of a presentation further clarified the basic aspects of the solution which they came to (Figures 29-34).



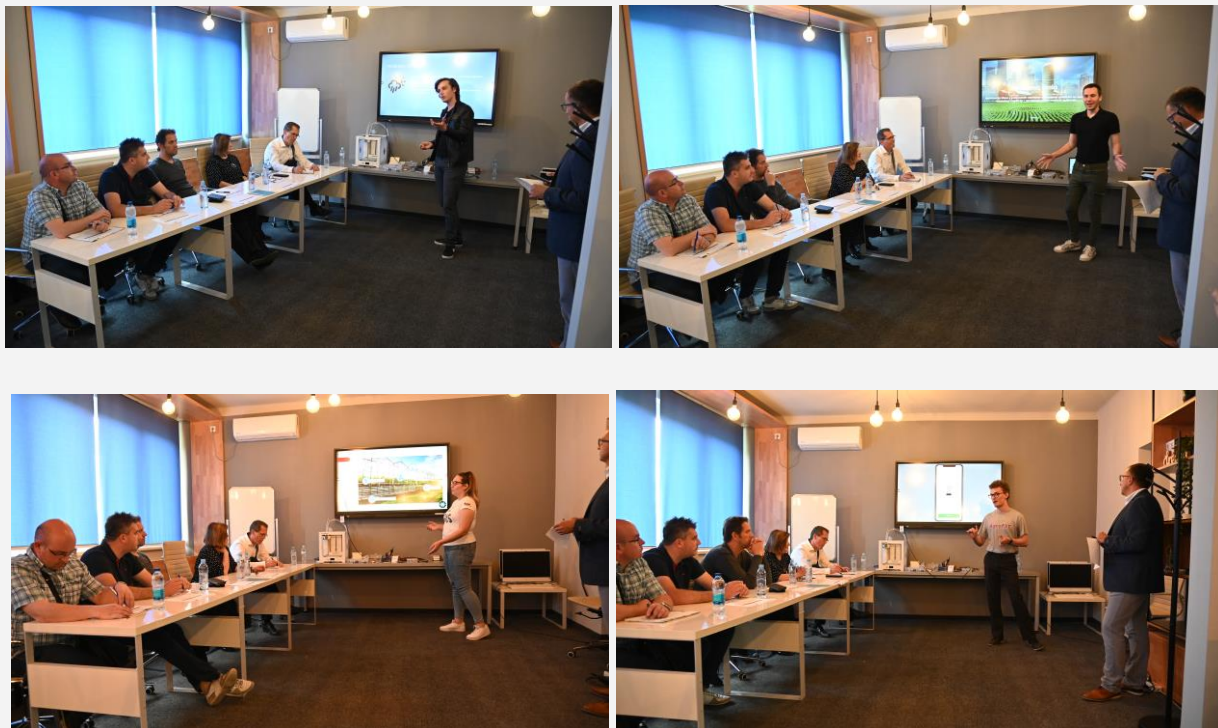
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After a tour and insight into the work of the students and the presentation, the jury decided the order of success of the competition teams. Although all teams showed very enviable success in their work during the Hackathon, the jury decided that the most successful team is "SALTCITY" composed of students from the University of Tuzla. It should be noted that all teams received awards for their participation. The prize fund provided by a large number of sponsors this year was around 6,000 euros.



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VI. place - team "SAES" - University in Mostar and University in Tuzla



V. place - team "BLATO" - University of Banja Luka



IV. place - team "GREENBYTE" - University in Donja Gorica and University in Mostar



III. place - team "AGROFIT" - University in Mostar



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II. place - team "AGRITECH Inovation Hub" - Prijedor



I. place – team "SALTCITY" - University in Tuzla



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Local media had great interest in this competition which covered the events at this year's hackathon.

<http://www.prijedordanas.com/?p=185681>

<https://kozarski.com/sutra-studentsko-takmicenje-hakaton/>

<https://infoprijedor.ba/index.php/2022/05/12/na-hakatonu-24-takmicara-poljoprivreda-poligon-za-informacione-tehnologije-video/>

<https://www.youtube.com/watch?v=PiydnbKbOZw>

In addition to software solutions, this year's hackathon also focused on the realization of a hardware solution that can serve as a model for solving the problem of controlling indoor conditions. In addition to work, students had the opportunity to meet and continue cooperation in the coming period, which is one of the most significant results of such activities.

Banja Luka, 20.05.2022.

Report prepared by:

Petar Nikolić

Đurađ Hajder

Miljan Cvetković



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