Ventspils IT Challenge 2023: Goes green!
Round 1 task
Group C

SITUATION DESCRIPTION:

In our everyday lives, we pay more and more attention to ecology and the impact our activities leave on the surrounding environment. We want to live in a quieter and cleaner city. Even when buying a new car for the family, we can take a step towards sustainability by reducing the CO_2 emissions produced by the car by 100%. These emissions are a type of "pollution" created by burning things like gasoline in cars or electricity in homes. This "pollution" is a gas called carbon dioxide.

Electric cars are becoming more and more popular, but many people are still not convinced of the benefits of using them. Did you know that the profitability of a car is determined not by the purchase price, but by the cost of use? Electric cars have lower taxes and maintenance costs, they can be parked for free in several parking places, you can drive them on a public transport lane, thus getting forward faster, and other benefits. Although the initial cost to purchase an electric car may be higher, in the long run using it may turn out to be cheaper. In addition, it will also contribute to the future of our planet by reducing CO_2 emissions.

TASK DESCRIPTION:

Your task is to create a prototype for a technology, it can be an application, e-calculator, etc., or a game that can educate users about the pros and cons of electric cars and help every family calculate the profitability of an electric car. This tool or game could include data about the average annual mileage of the user's car, different models of electric cars, their initial purchase price and comparison to cars with internal combustion engines, maintenance costs, average consumption for electric cars and internal combustion cars, fuel and electricity prices, charging method for electric cars (privately at home or with the public network, in what proportion), the possible travel distance on one full charge, you can also include data on the comparison of CO_2 emissions and the opportunities provided by the state support program.

The material to be submitted is a video and a link to the team's prototype for the technology or game. The video should show the process, the advantages of the technology or the game, and should involve and show all team members. The purpose of the competition is to raise awareness of how electric cars can affect both personal budget and environmental sustainability. This exercise could also include creative ways to visualise and compare this data to make it easy to understand and engaging. Perhaps the technology could offer the possibility to personalise data to fit a particular family's needs and lifestyle.

TASK:

- ✓ **Create a video presentation** which includes at least 2 team members, in video talk about how you got the idea for your prototype/idea and demonstrate the creation process.
- ✓ In the video presentation, explain as detailed as possible how your technology (game or tool) works, about its advantages and possible shortcomings.
- ✓ Your video should show how this technology (game or tool) will raise awareness about the profitability of electric cars and their impact on the environment.
- ✓ **Make a prototype of a computer game or a technology.** Game prototype can be made using any free or online programme that allows to share by sending a link to the created game. You can use tools such as Genial.ly, Scratch, Construct 2, Metaverse, Unity, GDevelop 5, Godot etc. Technology can be either an application prototype or web-based tool. It is important for the competition jury to be able to test the created technology, therefore, before submitting, make sure it works on a different computer, not only on the one it was created on.

TASK REQUIREMENTS:

- ✓ material to be submitted is a VIDEO and a LINK to the prototype;
- ✓ the format to be submitted is a link to your video that is uploaded to YouTube or a cloud service site (Google drive, One drive, Dropbox, WeTransfer etc.);
- ✓ the name of the video file must be 'VentspilsITC_2023_video _ TeamName';
- ✓ video must be in English or with English subtitles;
- ✓ video is no longer than 2 minutes;
- ✓ link to the prototype of your technology can be opened by anyone, the prototype can be tested;
- ✓ **the task must be submitted by 6 November 2023 at 23:59**, following the instructions on the competition website www.ventspilsitc.com;
- ✓ remember about copyrights – list the names of all people involved in the creation of the video, include name of the team and school, mention audio and video material sources if your video includes such materials.

TASK WILL BE EVALUATED BY:

- ✓ how the prototype and the video is made in accordance to the task;
- ✓ how well, understandable and creative the video explains pros and cons of electric cars;
- ✓ how convenient and precise is the created prototype of technology in helping a family calculate the profitability of an electric car;
- ✓ the idea and originality of the created prototype, the offered possibilities;
- ✓ technical execution – is everything working from the technical point of view, the use of digital tools and other technologies, used solutions.

TASK WILL NOT BE EVALUATED IF:

- ✓ video is not in English or does not have English subtitles;
- ✓ video is not available, cannot be opened;
- ✓ video material does not respect copyrights, plagiarism can be proven;
- ✓ link to prototype cannot be opened or does not work.

FINAL NOTES:

- ✓ For ideas – some examples of educational games:
  - copyrights (lv);
  - recycling;
  - footprint calculator.

- ✓ For ideas – some examples of technological tools:
  - calculator;
  - Swedbank car usage expenses calculator (lv);
  - arenaev.com;
  - chargevc.org;
  - fasterevcharge.com;
  - alternative-fuels-observatory.ec.europa.ec.

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