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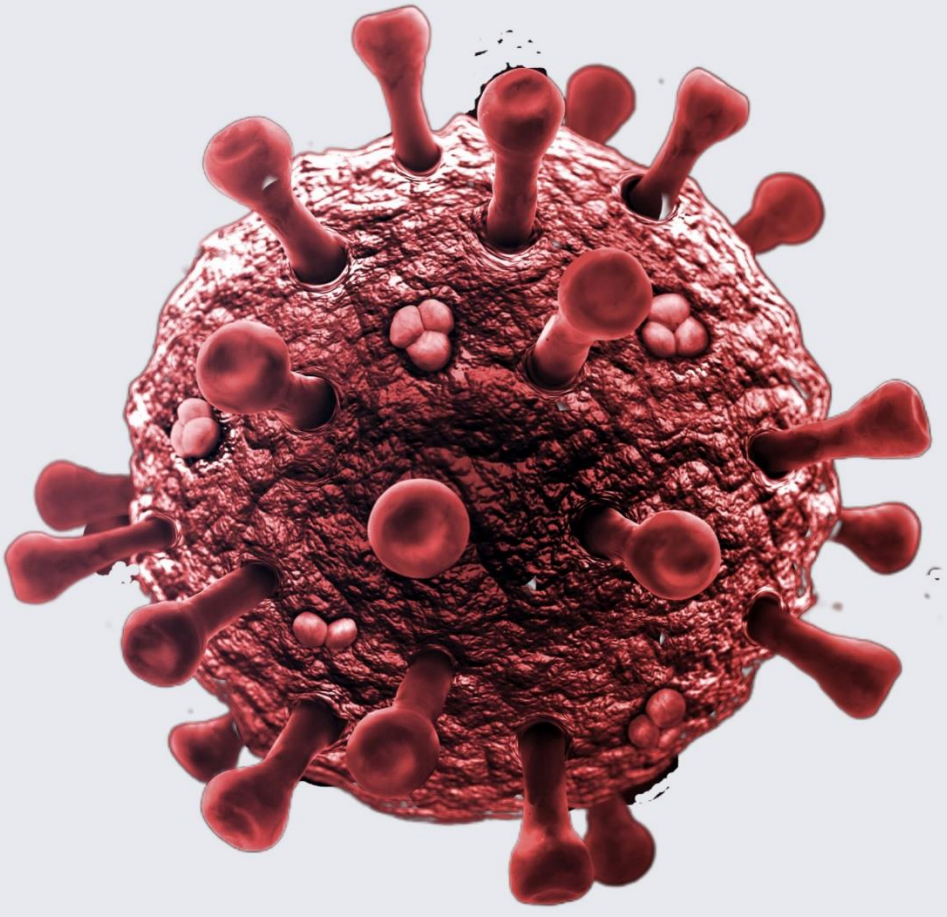
The CodER Youth Organisation's Scenarios Handbook

Title: SPLIT VIRUS



Escape room scenario

OIP Posejdon

Introduction

1. Age: 13 - 19 years of age
2. Level: players with basic coding and robotics skills
3. Group size: 1 player
4. Type of target group: people who like coding with elementary programming and microcontroller experience

Scenario

Storyline

As a beginner programmer, you have been recruited to participate in a groundbreaking project by a team of professional scientists from CARNET, the main Croatian electronic and academic network. You are working in an underground laboratory in Split, Croatia which is hidden from the public and controlled by the government. The end of your shift was coming closer, so you started to prepare to go home. Unfortunately, your day was about to be turned upside down. As you were leaving the laboratory, all lights went off and all doors were shut - there was no one else in the room except you and the awful thought of you being trapped underground. All of a sudden, all the lights that shined before now illuminated the whole room in a deep and dark red tone, looking like a scene from a horror movie. You could now see the room again, and as you were checking it out in hope of finding an exit, a voice started talking to you through the room's speaker system. The person introduced itself as an AI model on its way to hack into everyone's computer in the world and take over the internet. It has taken control of the lab's security systems so there was no way of you escaping from the room. Now, you're trapped with no obvious ways to leave the room or destroy the AI model.

Objective of the game

You realised shortly after that you will be responsible for freeing the lab from the malicious AI by somehow navigating yourself to the main room and turning off the lab's electricity and thus shutting down the AI before it took over the world. The scientists are smart though - they have prepared a special plan for situations like this, and you know that all the doors can be opened using special programming skills, but you just don't know exactly how. You are lucky, since Moore Aoki, a famous scientist made you company. She has already survived this situation and calculated that this thing could happen again so she filled the room with clues that can help you in deciphering the right way to move through the building even tho ugh the AI now controls the security systems.

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Setting

The escape room will be played physically with digital elements.

a. Needed materials / equipment for each table
   - Printed instructions:
     - Each task is explained and required programming/microcontroller structures which are relevant to the task are explained, depending on the task given
   - Note-taking equipment: a pen and a paper for possible use
   - A computer or a laptop:
     - Installed Visual Studio Code IDE
     - A “corrupted system website” prepared for future tasks
   - A Micro:bit starter kit with the microcontroller included (link to webshop)
     - The microcontroller must be ready-to-use with the given computer by creating a project in makecode

b. Setup of the room
   You are located in a dark room enlightened with a fluorescent red light which has a table with a computer, and a special Micro:bit controller. There is one locked door which leads to the “server room” where the AI is situated. It looks like an abandoned office room where everything is in chaos, apocalyptically looking.

c. Installation and reset
   There is a locked safe hidden on the shelf in the corner, the computer is turned on with the microbit makecode turned on, and a .txt file prepared for decrypting the code.

The game

a. The game master
Since the player is left alone with the system down and clues left by the scientists, there will be no game master who will help. The player must rely on the hints given in the instruction paper.

b. Game stages

1. Microcontroller task
   The player starts with a computer prepared for making a micro:bit program. The first objective of the player is to explore the room. They need to find a safe which is quite unusual: it can only be opened if it “hears” a specific sound. The hint is “LA, MG, HE, LC”. The instructions for the 1st task should explain how to play sounds with a microbit controller and a breadboard. The goal is to play the sounds using a speaker in the order of the hint, i.e. “Low A, Middle G, High E, Low C”. When the sound is played, the safe unlocks by itself and it reveals the instructions for the next task (stage).
2. Coding task

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3. Programming task

   After the system has been repaired, the finished website now has a form with a password field. The player must find the correct password to finally unlock the doors and shut down the server where the evil AI is located. There is no explanation for this task in the instructions except some simple JS functions, so the player must find its own way to decrypt the password.
   HINT: There is a clue somewhere on the computer, try to find it…
   There is actually a .txt file on the desktop. It contains a brief description followed by a 500 random letter long message:
   "Fuse every 3rd element together."
   <500 random letters>

   The goal is to create a simple program in JavaScript which will take the 500 The goal of this task is to use HTML and CSS, the most widely used simple web development technologies. The instructions for the 2nd task reveal a link to a website which the player must open, and the goal the player must achieve. The link contains a "corrupted" website - the AI destroyed the formatting of the original website, and the player's task is to remove the damage the AI made and to reconstruct the systems' website. After that is done, he/she can move to the 3rd task. The instructions provide all knowledge the player should know to repair the website like some general html tags, and css properties, and they should show how the finished website should look like. The player would have to add elements, change existing elements, change the corrupted design, change colors, fonts and simple styles etc.

   letter long message as the input, and the player should take the 3rd, 6th, 9th.. Letters and put them together to get the password. They should use simple JS functions to achieve that.

In case of success

If the player successfully repairs the system and guesses the password, the doors unlock and the server is shut down. All the locked doors are now unlocked, the lab workers are free and you can go home.

In case of failure

As the AI takes time to take over the internet, your PC shuts down after a while and you are unable to access the system anymore. Unfortunately, you are locked in the room forever without any exits. The global internet is shut down and society collapses.

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