Université Sétif 1   2-ème année(année 2021/22)
Faculté des Sciences   Architecture des Ordinateurs
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Video Card Project

1 Preamble

The project consist of creating a very simple video card circuit that can normally control a monitor using VGA port, the circuit is not intended to be implemented physically, but in simulation using Logisim logic simulator. The design and the proper working of the circuit is described by the academician Ben Eater, and showed on this website page https://eater.net/vga, four videos are presented in this page, but only the first two are mandatory for the realization. The two videos are well explained and normally you will not get any problem to understand the video card working circuit.

2 Clauses and conditions

- The circuit should be done in Logisim and saved like *.circ* file.

- The dead end for submission is for 31/11/2021 at 00:00, the solution will be put public just after.

- Only the first three valid submissions will be accepted, the fourth and after are not awarded.

- There is no mark bonification reward doing this project, but the first three accepted project would be given a special award.

- All the circuits should be constructed upon logic gates or flipflops, which means the use of library components like registers and counters is prohibited, except for the ROM.

- The use of external libraries is prohibited too.

- The project is to do for one student, it is not groupe project.

- The project to be accepted needs to mimic exactly the functioning of the video card described in video.

- No need to implement the analogic resistor divider for the VGA output, actually Logisim could not simulate analog circuitry.

- If many files are used to implement the project, they all may need to be compressed in one file and sent to my email : Kara.Abdelaziz@el-kalam.com.

- No need for filling the ROM with an image data.

3   The award

A symbolic reward is given for the first three accepted projects, and no mark bonification (pas de note bonus) for the project. The award is a small digital electronic kit for each one like in the photos above, with a small breadboard, some resistors, logic gates, switches, LEDs, and a seven segment display.
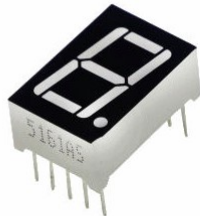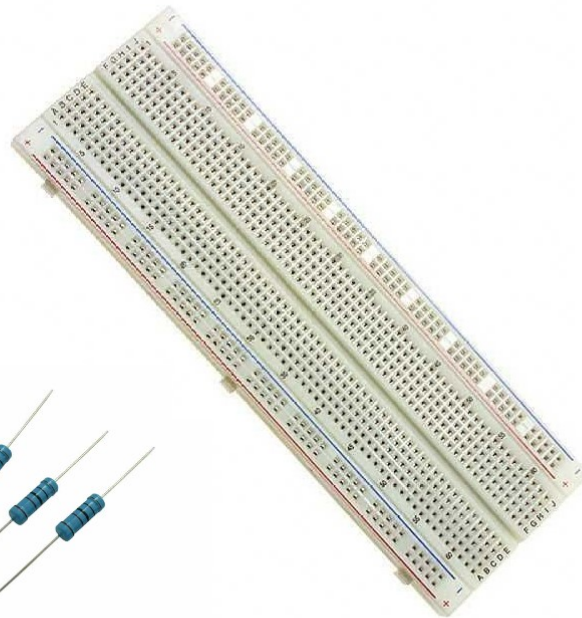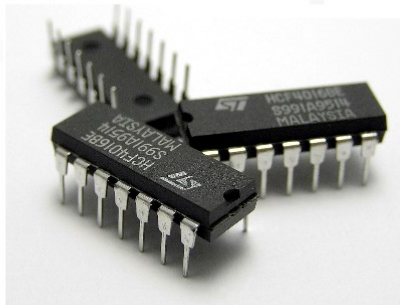
7 segment
Display

LEDs
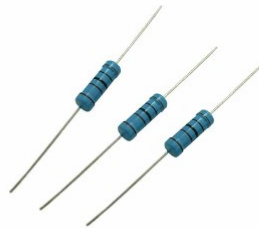
Resistors

Breadboard

Gates

Push buttons

وفقكم الله