The first project of the club is to design **the jeopardy buzzer game circuit**

Jeopardy! is a popular American television game show created by Merv Griffin. The show features a quiz competition in which contestants are presented with general knowledge clues in the form of answers.



Contestants use buzzers to signal that they want to provide an answer to a survey question. The first contestant or family to buzz in and successfully provide a correct answer gains the opportunity to play or pass the question, depending on the rules of the particular round. The buzzer system is a key element in the game to determine which contestant or family gets the chance to respond first.

**How to Participate:**

The game follows a structured format where the host presents a question, and contestants who possess the correct answer must engage by activating a designated push button. Upon successfully doing so, the contestant becomes eligible to respond. A correct response results in the accrual of points, whereas an incorrect response leads to a deduction of points. It is important to note that once a contestant has initiated the button, other participants are precluded from accessing it, irrespective of any subsequent attempts.

**System Overview:**

The system is comprised of a central main controller linked to eight contestant push buttons. These buttons are strategically positioned on elevated surfaces to facilitate convenient and swift access. Additionally, each push button is equipped with an integrated LED light, serving the dual purpose of indicating the respondent to the audience.

Furthermore, the main controller features a compact buzzer mechanism designed to promptly notify the host when a participant has pressed their respective button and is ready to provide an answer. This streamlined system ensures a seamless and organized execution of the game, enhancing the overall experience for both participants and spectators alike.

**Required components**

3d printer filament (1 piece): <https://www.amazon.ae/dp/B09QKRFX66?psc=1&ref_=cm_sw_r_cp_ud_ct_MZSJDD3HB0PA2EZ20MV8>

Batteries (1 piece pack of 2 batteries): <https://www.amazon.ae/dp/B084MFTTFT?psc=1&ref_=cm_sw_r_cp_ud_ct_MZSJDD3HB0PA2EZ20MV8>

Buzzer (1 piece): <https://www.amazon.ae/dp/B0CFV95MK7?psc=1&ref_=cm_sw_r_cp_ud_ct_MZSJDD3HB0PA2EZ20MV8>

GIGA display (1 piece): <https://www.amazon.ae/dp/B0CKBZLTND?psc=1&ref_=cm_sw_r_cp_ud_ct_MZSJDD3HB0PA2EZ20MV8>

Push button  (8 pieces) : <https://www.amazon.ae/dp/B07XM5YC71?psc=1&ref_=cm_sw_r_cp_ud_ct_MZSJDD3HB0PA2EZ20MV8>

Arduino GIGA (1 piece): <https://www.amazon.ae/dp/B0BTTRZ9TB?psc=1&ref_=cm_sw_r_cp_ud_ct_MZSJDD3HB0PA2EZ20MV8>

Conductor cable (1 piece): <https://www.amazon.ae/dp/B003KPYRJM?psc=1&ref_=cm_sw_r_cp_ud_ct_MZSJDD3HB0PA2EZ20MV8>

All other components are available in our stock

**Who is involved in the design?**

* The students of ELE3614 and ELE4423 are involved in the design of the circuit, the programming and the simu lation. This will be part of a lab experiments.
* The students of ELE2573 are involved in the PCB circuit design, Hardware implementation and testing. This is also part of their Lab.
* All students are involved in the installation of the design, the 3D printing of the boxes and the wiring. This can be done during the club member meeting.
* At the end of the project, the design will be ready for any social activity