Major project: ordering components

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This document gives the procedure to order electronic components for the major project.

1 Deliverable

An Excel sheet generated by exporting the basket of the retailer. One per retailer (at most). This must be emailed to Thomas Braipson and professors by Friday 4 December at 23:59.

2 Budget

A budget of 100 euros per group is provided by the University (shipment fees excluded).

3 Retailers

- Mouser (`https://eu.mouser.com/`)
- Farnell (`https://www.farnell.com/`)
- RS Components (`https://befr.rs-online.com`)

4 Tips for choosing components

- First of all, find out what you need for your project (e.g. a servo motor) and dimension things (e.g. the torque of the servo).
- Go to retailer websites and search for what you want. There will more than probably many results to a key-word based search. Filter out results by parameters such as availability, size, package, physical properties that you want,...
- Pay attention to availability! Choose only parts that are in stock.
- Pay attention to packages! Choose through hole and DIP so that components fit into a breadboard, and choose SMD for your PCB. Soldering smaller components than 0402 by hand is very ambitious and deprecated. Similarly, soldering components in a BGA package is very ambitious and checking the quality of the solder requires X-ray devices, that we do not own. Generally speaking, choosing tiny packages for no reason is a bad idea. Moreover, whenever possible, choose components available both in SMD and through hole or DIP, to be able to test them before ordering the PCB. If you component is only available in SMD, you can by one plus a breakout board (or make your own prototyping PCB) to test it.
- Do not hesitate to by spare parts.
- Pay attention to compatibility between components! For instance, check voltage supply levels, that typically are either 5 V or 3.3 V.

5 Other option

You can request free samples from Würth Elektronik (`https://www.we-online.com/en/products/components/ordering-form`). You should do it yourself. If you do so, add an Excel file listing what you ordered there.