# CS205 - LAB2

Write a program that takes a series of numbers on the command line, reads from stdin and displays on stdout the corresponding fields (fields in the input are supposed to be separated by a special separator character). The same character will be used in the output as in the input.

You are provided for testing with a big file called `unidata.csv` (coming from a US government website) with the list of higher-education institutes in the US, as well as a spreadsheet describing the data.

Your program will use Unix-style flags to specify some options. The function to use for processing options is called `getopt()` and `man 3 getopt` provides explanations as well as a complete example ("3" is required, there is another `getopt` in section 1 of the manual). You can copy, paste and adapt the example. Ask if something isn't clear for you.

You are asked to implement two flags:

`-s` followed by the separator used (default separator: one space)

`-i` followed by the number of lines to ignore (default: 0). You may have lines to ignore when the first line(s) contains headers, not data. It's the case in the sample file that is provided.

**Example:**

If you just want to extract from unidata.csv the state abbreviation (STABBR, 5th field) whether the institution is active (CYACTIVE, 39th field) and the institutional category (INSTCAT, 45th filed), you should enter the command (I'm calling the program extract, you can give it any name you want):

```
extract -s ';' -i 1 5 39 45 < unidata.csv
```

`-s ';'` means that the separator is a semi-colon

`-i 1` means to ignore (skip) the first line.

## Simplifying assumptions:

- Field numbers are always provided in increasing sequence (typing "39 5" is forbidden, because 39 is greater than 5)
- You cannot repeat a field ("5 5" is forbidden)

Your program will check that assumptions are verified and display an error message on stderr of they aren't, and return something else than 0 to indicate the error.