

**C++ Programming techniques**  
*PhD program in Bioengineering and Robotics*

Final project

To develop a hierarchy of classes to handle documents.

To implement a base class `Document` with the following members:

- A dynamic array of keywords (`string* keywords`).
- The title.
- The number of keywords.

From the class `Document` the following classes have to be inherited:

- `WebPage` with the private members `url`, `string *text` (to store the content of the page) and the number of strings of the text.
- `Spreadsheet` with the private members `row_num` and `column_num`.

The classes must be developed by defining and implementing all the members and member functions necessary for the correct functioning of such classes.

**Requirement 1:** the development of all the test functions needed to verify the correct behavior of this class hierarchy is required.

**Requirement 2:** Moreover, the polymorphic behavior must be assessed through the following steps :

- To create a list of pointers of type “base class” (to use the list of the standard library `std::list<T>`. See the online documentation.).
- To add some items of the three different defined types.
- To print the information of the different items of the list.
- To release the allocated resources.