

# Game project

The assignment to validate this course is to write a mini-game in Java. The game may use a graphical user interface with one of the frameworks seen in class but it doesn't have to. A pure text-mode game won't necessarily receive a lower-grade than a GUI one or be graded more severely. It should consist of a repository of Java code (some light scripting in other languages to package and build it is ok) and must be sent to me before the 30th of October (strictly before, that is, you have until 2023-10-29 23:59 UTC+1) under the form of a link to a `git` repository or an archive (`.zip`, `.tar.gz`, `.tar.bz2` or `.7z`) containing the sources and the sources only (**no compiled binary**).

The project is meant for you to demonstrate your command of the concepts studied in class such as inheritance, typing or packages. The source code of your game *must* include interfaces and abstract classes, so I suggest to you some sort of farming game where they occur naturally (because, usually, in those games the objects found or used form a tree of families sharing common properties — classes — or fulfilling some common purpose — interfaces) but there is no obligation. If you choose a different kind of game, please let me know in advance and explain how you plan to use interfaces and abstract classes in your implementation.

There is no firm notation grid but the following criteria will be taken into account to give you a grade between 0 and 20:

- Reuse of the object-oriented programming concepts seen in class:
  - are those concepts used correctly ?
  - are they used in a relevant way ?
- Technical quality of the project
  - have you documented properly the way to compile and use your program, for instance with a README file ? (you shouldn't assume I use the same development environment as you, i.e. "I just click the 'Run' button" is not a proper compilation instruction so in the end everything should be compilable fairly easily from the command line with `javac`)
  - is it compiling when following these instructions ?
  - does it run without flaws ? are there unhandled errors at run-time ? bugs ?
- Quality of the code

- how easy to understand is your code ?
- how well are your variables, functions and classes named ?
- is your code clean from a typographic perspective ? (no extra spaces trailing on lines, consistent indentation — tabs or spaces, pick your side — and naming conventions — case, abbreviations or not). The code should be homogenous enough that one can't know who has written what parts just by looking at them
- are the comments appropriate ? (have you used them to document how your code is used and works or abused them to caption the obvious ?)

You will need an overall grade of at least 10 and a strictly positive grade in each of the first-level criteria above (concepts, technical quality, code quality) to pass.

You may work on your project in groups of up to 3 students but I want all of you to work on all the aspects of your program: it is not ok for one student to only think about the gameplay while the other does the implementation. A global grade will be given for the group. Once your group is formed or you have decided to work alone please send me an e-mail to register your project.