

Abstract

Motivation:

Remarkable advance has been made in the field of computer science. Software now are solving multiple sorts of problems in almost all the fields; in addition, they can be used as educational tools that implement the concept of interactive computer aided learning or what is known under the name of electronic classes. Human interaction is important because most of people feel frustrated when dealing with computers. So improving human graphical interfaces and provide them with a moderate set of functionality is the challenge.

Most of educational tools are domain specific and not easy to extend, from here it comes the idea of developing software that can handle any field of science and can be extended with the minimum effort. It means that building the human graphical interfaces and the database where the knowledge is stored under the form of case studies is already provided. Other challenges are how to provide future developers with reusable classes, to make the software used through a network and finally to manage the differences among different user categories (business, instructor, and student).

This software is not only an educational tool but also help business community to solve its economical problems by providing them with solution and advice. It is programmed using the principle of object oriented and the programming language Java.

In order to show that the software has all these abilities, four representative fields (Finance, Microeconomics, mathematics and statistics), that almost every other problem will fall under these fields, has been chosen as examples. However the employed ideas and concepts can easily be applied to other areas of than the above ones as well as other fields of science.