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Ht 95

project proposal
TDBC10
Software Engineering

Informal Specification of a floor planning system

General

How often have you tried to draw a correct and complete plan for your flat? How long did you spent computing room area, wall/chimney area, etc. The proposed system shall help you to with floor planning and furnishing.

System Overview

The system shall provide the user with a window based user interface. It has two main functions.

- **Floor Drawing.** Users should be enabled to draw a rough picture of a room or a floor. For each part of the room boundary (e.g. wall, door, window, staircase, etc.) the user the gives the necessary data (e.g. size, thickness, alignments, etc.) to build a picture of the room. The program then automatically computes room area, etc.
- **Floor Furnishing.** Users are provided with a list of items of furniture (e.g. heating element, table, chair, cupboard, house plant, etc.). They can then select an item, adapt size, color, etc., and then place it somewhere on the floor plan. Only the library administrator is allowed to register and order/subscribe entities.

It should be possible to chose between several scales (e.g. 1:10, 1:25, etc.).

Advanced Functionality

If such a system is actually used its functionality should also provide the following capabilities:

- **Plan validation.** Each room needs a door. The program should check that each room has (at least) one door, if the spacing between items is correct (e.g. if a chair is placed on a table, there needs to be some place left behind the chair), and similar (more or less obvious) things.
- **Furniture Creation.** Since it is impossible to foresee all possible kinds of furniture, it should be possible to create custom furniture and even add new features to the list of items of furniture.