

# Simplified Modeling Language

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2016/05

## Revision History

Revision	Date	Author(s)	Description
0.1	2016/05	Yarco Wang	first edition

### Abstract

SML, the short name of Simplified Modeling Language, which is also named as Simple Modeling Language or Small Modeling Language, is a modeling language used in modern development process. Actually, it is not just a modeling language, it is a part of my XP(Extreme Programming) experiment.

It contains only *three* types of diagram: *Class-ER Like Diagram*, *Use Case Diagram* and *Activity Diagram*.

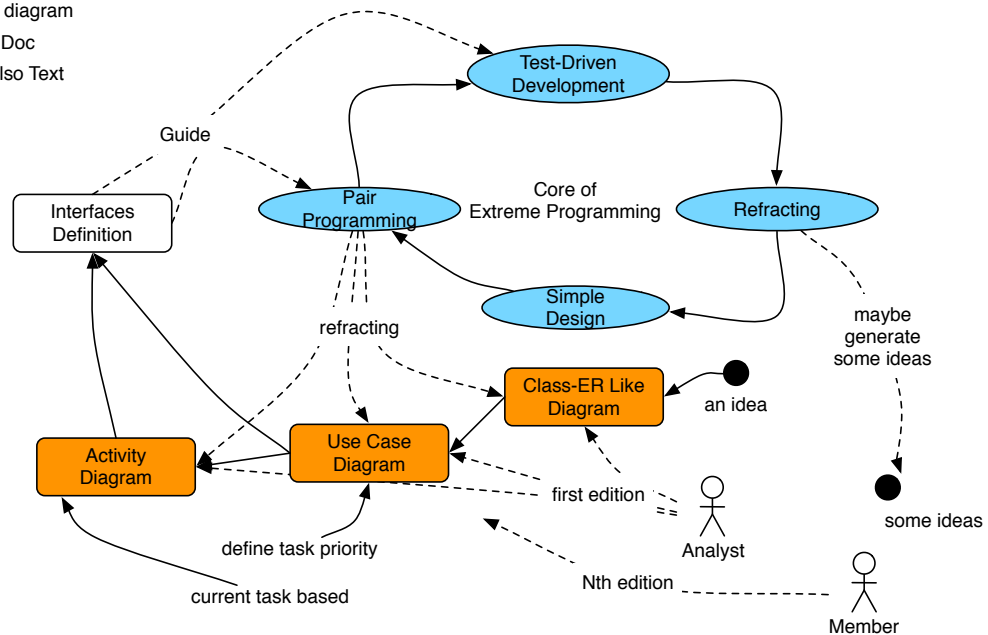
## I Workflow

For better understanding the SML, let's first take a look at the core of XP (colored in blue), in the chart below.

A project begins from a great idea. In XP, it is named as "Simple Design". Normally, in our case, it should be a file with an explanation of the idea, in which it may only take less than 100 lines.

And then, the analyst defines the diagrams as the initial version. After finished writing the doc "Interface Definition", the pair of the developing group begin to work: one for coding, and the other for writing tests.

When during the coding or discussing the requirements, they may find some information lost in the doc, it should be refracted in the doc – then the doc is not just the analyst’s task, it becomes something in continuously improving.



## Simplified Modeling Language

## 2.1 Basic Ideas

Normally when a project started from an idea, it could be more or less than 20 lines text. We accept it, and consider it is just a process to be more clear. The modeling is not just for building the modeling at once before the coding started. It is a way continuously responding to current software design.

Why we are lazy on this? Because sometimes, we can not restrain ourself: as an analyst, he may lost in his imagination, then the doc becomes something large but not useful. So there is a rule when considering this:

- If unnecessary , we are not going to do that;
- If something unclear, we are not going to do that (just leave "...");
- If the cost of dealing the thing than the profit we could get, we are not going to do that;
- Try to make the thing re-usable and add more functions on it;
- When drawing, we should be an artist, but not the machine creating similar things, each diagram should be unique when at first glance;
- We draw things in “tree” like pattern, not “graph” like pattern (“tree”, “graph” here is the something in data structure);
- We prefer curve lines, and even you can put flower in each of the diagram to make it special;
- Everything good for remembering the diagram are encouraged;
- Colored thing is welcomed to figure out current tasks (or priority).

## 2.2 Class-ER Like Diagram

The *Class-ER Like Diagram* is a diagram which merges class diagram(UML), Entity Relationship Diagram, mind map and web CRUD OPs’ thinkings together.

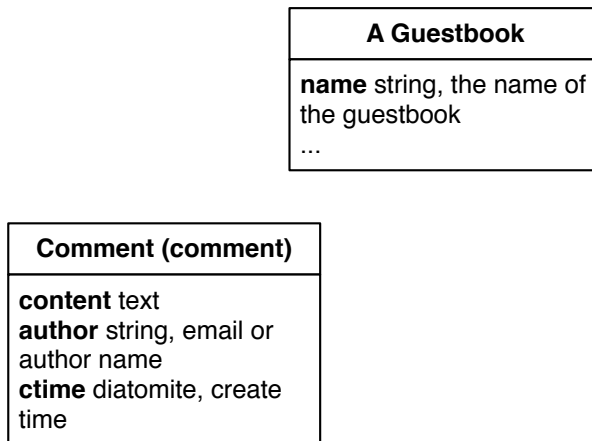
When the project started from 20 lines text, there are different types of items in the description. You can recognize them as “object” or “action”. Ex.:

This is a guestbook where guest could write down comments.

Here, the *guestbook* and *comments* are the “object”; *write down* is the “action”. We ignore those actions cause for now the requirements are not very clear, we only care about those objects.

For more complex project, actually, each object should be represented as a diagram when the requirements become more clear; but here, cause it is very simple. We put *guestbook* and *comments* together below.

### 2.2.1 Entities

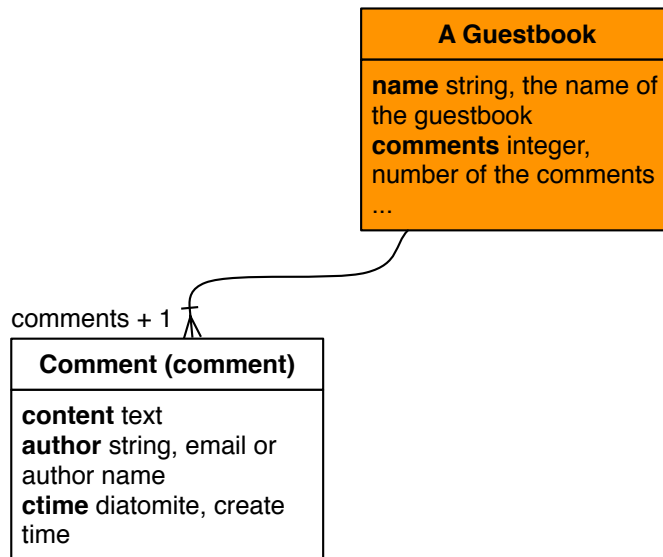


## A Guestbook

In this diagram (it is just like the class diagram in UML), but we noticed several differences:

- The title of the object is not very strict (here, “A Guestbook”). You can add extra text in the title between the parenthesis (here, “Comment (comment)”). The meaning between the parenthesis depends on the team. Here we defined it as a *tablename*. You can even add more, ex. “Comment (comment, cache)” means it should also be cached or optimized.
- The format of the attribute contains *a name*, *the type* and *the description*. It is not very strict also. Actually, the type is also a part of the description. You can even add more like “default to null”.
- The “A Guestbook” entity also has a field “...” which figure out the requirements are not clear. But it won’t stop us to a prototype.

### 2.2.2 Connections And Other



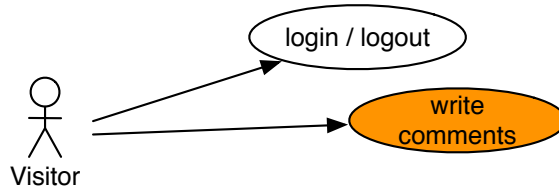
## A Guestbook

We are going to add more. The relationship (connection) between the entities normally figure out the inheritance between different class in UML. And they also have “association” relationship etc. But we use ER relationship instead it. The reasons are listed here:

- In modern concepts, we are going avoid inheritance because of strong coupling and dependence. We also invent “inject”. Then it is in someway reducing the importance of old style relationship. But ER relationship is more simple, clear and easy to remember.
- The connection is represented as curve, but not a direct line.
- The entity “A Guestbook” is colored in orange to figure out it is the root (to make you focus on it).
- The text “comments + 1” above entity “Comemnts” figure out that when creating (CRUD), it should trigger relevant action (but you don’t have to add more description, just a remind).

## 2.3 Use Case Diagram

Use case diagram is the same as in UML, but we add the color to figure out the task current we focus on (or the priority). (The very important thing is you should keep the idea in mind – it is dynamic, not fixed.)



## 2.4 Activity Diagram

The activity diagram is also the same as in UML, but it is only to explain the details in *Use Case Diagram*, and also for current tasks – that means it changes quite often.

# 3 Text Doc

Just like when at beginning, we only have one line text. After we did previous diagrams, we are going to write the interfaces which is very clear in our use case diagram and activity diagram. But of cause, it is in text format (so we are not going to describe it here). As you can view in the main workflow, the pair of the developers work depending on this. Then, they will also do response to the doc (the diagrams or the text files) if anything would change.

# 4 Contact Author

You can contact him through yco\_w at me.com. He also accept the donation through paypal using the same address. Cause you know it is hard to focus on the public stuff in China, so even USD 1 is welcomed :) .