UML Modeling for Tea / Coffee Machine

By Mr. S. Venu Gopal, Mr. H. Venkateswara Reddy & Mr. G. Sreenivasulu

Vardhaman College of Engineering

Abstract - Unified Modeling language (UML) is one of the important modeling languages used for the visual representation of the research problem. In the present paper, UML model is designed for the Tea / Coffee Machine which is used for the purpose of the public in the hotels or restaurants'. The class and use case diagrams are designed & performance is evaluated as a sample program through a case study.

Coffeemakers or coffee machines are cooking appliances used to brew coffee without having to boil water in a separate container. While there are many different types of coffeemakers using a number of different brewing principles, in the most common devices, coffee grounds are placed in a paper or metal filter inside a funnel, which is set over a glass or ceramic coffee pot, a cooking pot in the kettle family. Cold water is poured into a separate chamber, which is then heated up to the boiling point, and directed into the funnel.

Keywords : UML, Modeling, things, class diagram, use case diagram, annotational things, package, note notation, Relationships and stereo types.

GJCST-C Classification : D.2.2

UML MODELING FOR TEA COFFEE MACHINE

Strictly as per the compliance and regulations of:

UML Modeling for Tea / Coffee Machine

Mr. S. Venu Gopal [α], Mr. H. Venkateswara Reddy [σ] & Mr. G. Sreenivasulu [ρ]

Abstract - Unified Modeling language (UML) is one of the important modeling languages used for the visual representation of the research problem. In the present paper, UML model is designed for the Tea / Coffee Machine which is used for the purpose of the public in the hotels or restaurants'. The class and use case diagrams are designed & performance is evaluated as a sample program through a case study.

Coffeemakers or *coffee machines* are cooking appliances used to brew coffee without having to boil water in a separate container. While there are many different types of coffeemakers using a number of different brewing principles, in the most common devices, coffee grounds are placed in a paper or metal filter inside a funnel, which is set over a glass or ceramic *coffee pot*, a cooking pot in the kettle family. Cold water is poured into a separate chamber, which is then heated up to the boiling point, and directed into the funnel.

IndexTerms : UML, Modeling, things, class diagram, use case diagram, annotational things, package, note notation, Relationships and stereo types.
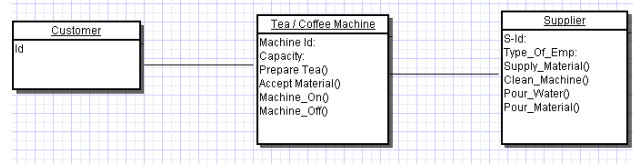
I. INTRODUCTION TO UML AND TOPIC

This section provides a general overview of UML concentrating on the syntax that is relevant to this paper. Figure 1 displays the different types of UML syntax used in this paper. In addition, we introduce new UML syntax (Vocabulary) in the form of stereotypes. For further information on UML the reader is referred to[1] . UML has three main building blocks: Things, Relationships, and Diagrams. "Things" are the main components of the model. "Things" are connected by Relationships. Diagrams display the Things and Relationships in different active or passive contexts. For example, a diagram can document a dynamic process in which a student may register for a class or it can document a static data structure of an organization. There are four kinds of things: Structural, Behavior, Grouping, and Annotational. One of the seven structural 'things' of interest is a class. A class can contain a name, attributes, and operations. Classes will be used with objects. Behavior "things" are the verbs of UML. They are the dynamic parts of the UML. Behavior "things" will not be discussed in this paper. A grouping "thing" as the name states, permits the combining of different parts under a similar category. We will use the grouping "thing" named 'package'. The final "thing" is annotational (it can also be called as a note). Notes comment a model. Notes can be used to comment the enterprise constraints of a key chain.

II. MODELING OF TEA/ COFFEE MACHINE MAIN IDEA

Object Diagram for Tea / Coffee Machine working model.

III. BASIC NOTATIONS TO MODEL TEA/ COFFEE MACHINE

The following are the basic notations to model the Tea / Coffee machine working model.
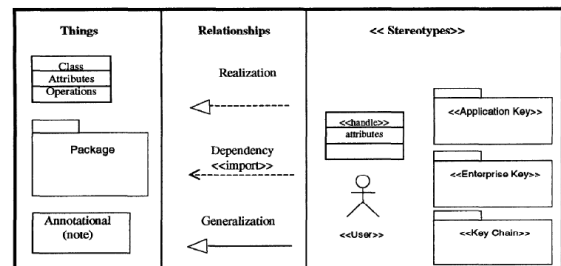Basic Notations to Model tea / Coffee Machine

Figure 2 :
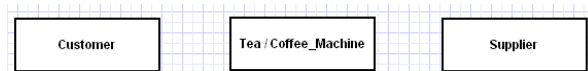
Class Diagram for Tea / Coffee Machine working model.

Figure 3 :

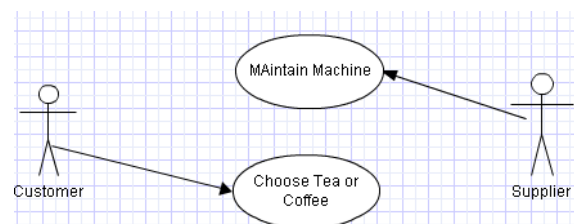Use case or Behavioral Model for the Tea / Coffee Machine.

Figure 4 :

Author α : M. Tech (CSE), MISTE. Sr. Assistant Professor, Department of Computer Science and Engineering.
E-mail : venusekkeri@gmail.com
Author σ : M.Tech(CSE), (Ph.D), Associate Professor, Department of Computer Science and Engineering.
E-mail : venkat_nidhish@yahoo.co.in
Author ρ : ME, MISTE, Associate Professor, Department of Computer Science and Engineering, ACE Engineering College , Hyderabad.
E-mail : gvsreenu@gmail.com

IV. Conclusion

From the above, it is concluded that the UML Class model is a powerful model used to depict the software development problems and the hardware problems. In the Tea / Coffee Machine Designing, it's a time consuming with compare to normal process. The present work is further extended by considering the different kinds of activities performed by customer and supplier. The present work is considered only for the basic model of tea / Coffee machine at therefore, the UML modeling for Tea / Coffee machine can be further extended for the automatic machine.

References Références Referencias

1. User Interface Modelling with UML Paulo Pinheiro da Silva and Norman W. PatonOMG ,
2. "Unified Modeling Language Specification", Available Online Via www.omg.org , 2001
3. B. Selic, and J. Rumbaugh, "UML for Modeling Complex Real Time Systems", Available Online Via ww.rational.com/Products/ Whitepapers/100230.Jsp.
4. Mr. S. Venu Gopal is a Sr. Assistant Professor, Department of Computer Science and Engineering,Vardhaman College of Engineering, Shamshabad – 501 218, Hyderabad. He got his M. Tech (CSE) from JNTU Hyderabad. He has more than 7 years of teaching experience.
5. Mr. H. Venkateswara Reddy is a Associate Professor, Department of Computer Science and Engineering, Vardhaman College of Engineering, Shamshabad – 501 218, Hyderabad. He is perusing Ph.D from JNTU Hyderabad. He has more than 15 Years of teaching experience.
6. , is a Associate Professor, Department of Computer Science and Engineering, Engineering College Hyderabad, He is perusing Ph.D from JNTU Hyderabad. He has more than 10 Years of teaching experience.

2