Pro-Log Software Design Methodologies In Universities

Surekha Lanka, Sidra Ehsan

Abstract ***This paper shows us reasons for using the ProLog and its features. Present achievement of technologies, selecting of artificial intelligence to ensure to prove the knowledgeable, aware of the character or nature of facts and rules by the visual ProLog. It is a high-status tool in programming, artificial intelligence and used for the development of expert systems. This dissertation is on tutorial to understand visual ProLog for someone who is studying in universities. It also helps in developing different applications in real time to enter a particular profession. And also we will consider general facts and testing with the Visual ProLog software.***

Index Terms - compound domain, Expert system, IDE, knowledge base, VIP.

I. Introduction

Educational universities are guiding this visual ProLog for the students to develop or increase in capacity by education. So now days this language has an extreme development and this will continue in the future also. Programming happens to be complicated way. Pioneer of programming languages expressed readiness to do something more than a programming language. In this basically I am explaining about what you will observe, when the visual ProLog start. What you have observed the integrated development environment (IDE) on this platform, we are going to code in Visual ProLog (VIP). In this essential foundation you can code with basic running examples. So this gives an impression can do better with visual ProLog.

A. Environment of Visual ProLog

Visual ProLog based on the logical language and feature programming with absences of difficulty to implement the application of commercial real life. An aim is to ease the resembling outcome of complicated knowledge stress problems. To implement an expert system, need to install a Visual development Environment Application can build with VIP for the Microsoft 32/64 platforms.To start an application in the GUI World, begin the VIP.EXE in the BIN\WIN\16 or the BIN\WIN\32 or the BIN\WIN\64 directories under the main VIP directory [3]. This EXE file can support some technologies like LINUX, OS/2 WRAP, SCO UNIX,PCUNIX, 95/98/ME, Windows XP/2000/NT/VISTA and later [4]. When last access file closed on the system of Visual ProLog had an open project (a. VPR file) last time, the project will get mechanized to reopen when the next time it starts [4].

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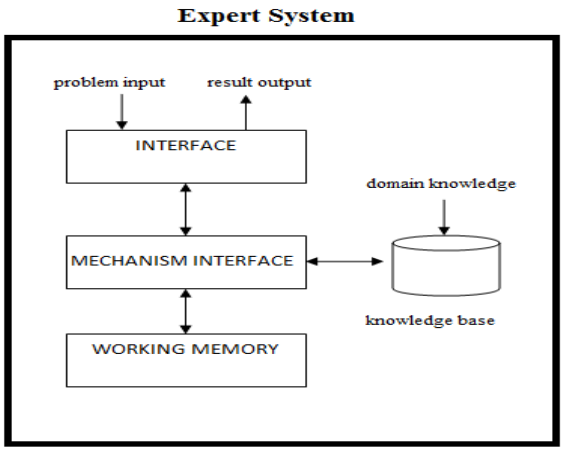
B. The Applications of Expert Systems

The expert system is combined concepts that originate from fields of experts and exploit their knowledge to understand the problem through the programs which are exists to set of rules and high volume of facts that scrutinize the information. Expert system has main a component's interface which handles conversation between user and system, mechanism interface is tool is applied to the knowledge base which store fats of the world. Working memory with specific data to solve the problem. Domain knowledge is relevant to programmer goals by the program. The knowledge base is a database which consists of facts and rules in natural language.



The applications of expert systems technology are implementing an educational institutional point of view to find their way into most relevant areas of knowledge work. According to the knowledge we will design an expert system for library by using Visual ProLog, this expert system to help librarian of the KAA University main library, occupies 3 floors. This helps to search for any book, whether the book is under issue or renewal or in stock, who is the book author and publisher or book category like sciences, medical, classic, horror, electrical, historical etc., and also our system calculating book fees for the late returning or lost by the student. The search could be by the item id, item name, author, publisher or item category.

II.Design Methodology of Expert System

For implementation of expert system we use algebraic data structures also call it as compound domains [8]. This method is used in several chunks of data as a distinct entity; best example for compound domains is Lists [6]. So Visual ProLog elaborate built in domains like char, pointer, Boolean, object, integral, real. This knowledge is self controlled through making a library system with a set of rules which contains IF part and the THEN part [6].

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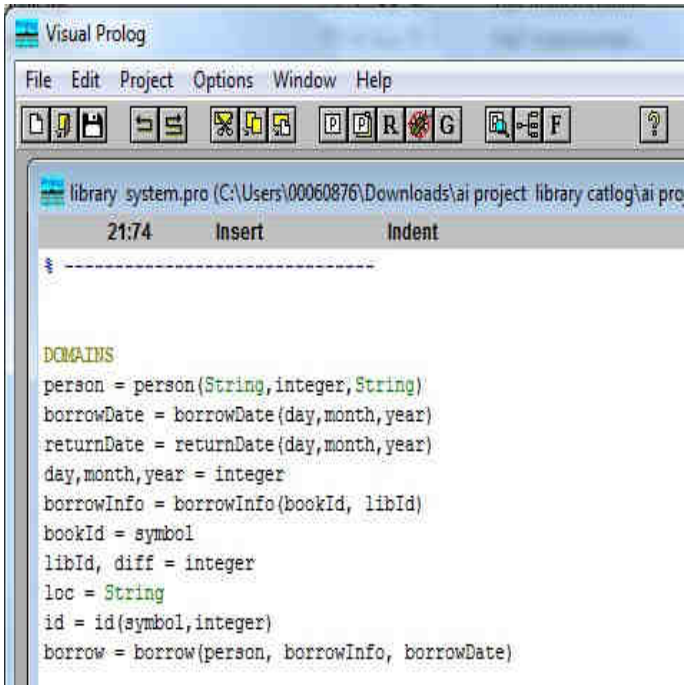
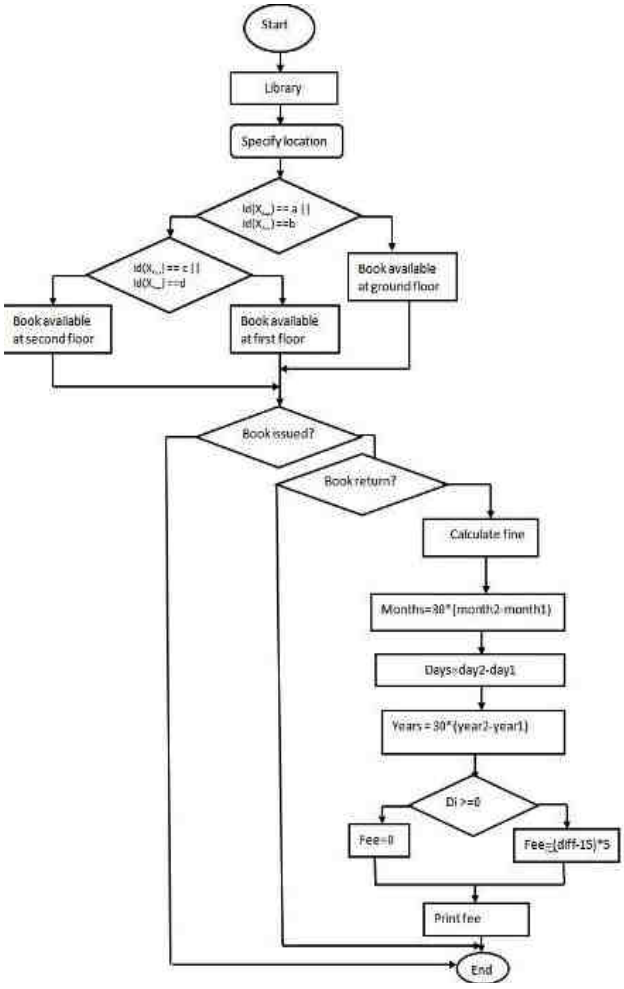


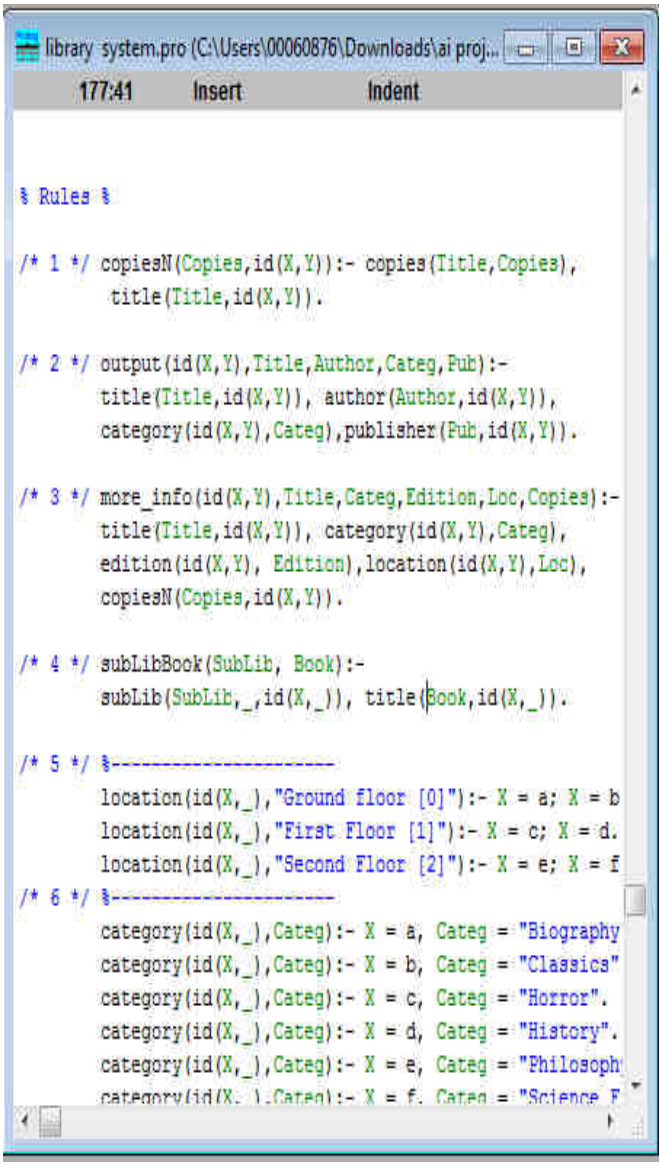
The mechanical interface handles particular rules are to be fired. The idea of expert system is having the feature how many copies available, issued, where is the location of Books (1st floor or second or third). Calculating the fee to book, whether last return or lost.

III. Flowchart Of The Expert System



IV.Rule Based System

Rule base expert systems modify the software as a database. So, unlike conventional programs, the volume of knowledge to program is not a major concern, like in the database. The engine operation is the same [9]. Whether the rule base has 10 rules or 10000. Present knowledge base of approximately 32 rules used Library System. Attributes in rules must be given by the user like, edition, author, id, name, etc. Some sample rules of the Library system are shown below.



V.Goals for Expert System

The GOAL also treated as a program by the visual ProLog and it compiles and links and generates in a windows executable form [10]. Our expert system should “create” the way of solving the problem, as per the user request by finding the absent data from reaching goals as early as possible. Here our goal is to find out. And the press **Ctrl+G** to test the GOAL. A compound goal made up of two or more parts, and sub goal is the part of the compound goal. In our expert system we are testing the goals that we require books details, the title, and category of the book, edition and location of the book, number of copies available in the library

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VI.Conclusion

In this paper, we are going to explain how the artificial intelligence concept can be improved by utilizing Visual ProLog software. This software mainly utilizes in universities so that students get practical approach of the course. The ProLog inference engine is based on the information currently on a library system. This explains about expert system in a library. The main application area is dealing with other books available or not, books issued to students, have to renew, lost, calculating the last return fee by the system explained in a single attempt answer.

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