ABSTRACT

     Programmable Logic Controller (PLC) is the an electronic cicuit that enable to do many kind of control function at complex levels and being used asa substitute mechanic relay components on control system. On last ten until fifteen minutes, every kind of programming language has been used for programming PLC. For one kind of programming language such as Ladder Diagram, everykindof PLC has their own rules and the way of programming. Usually, the modern industries not only using onekind of PLC but many kind of PLC. This way, become not efficient in time and material side.

     Visual Basic.Net is a software to develop and build an application that working on .NET Framework system using Basic language. In thisfinal project will develop from last final project of Agustine Rose Shinta Hartono who already designed a software that will accommodate a PLC using ladder Diagram with Visual Basic.NET software's help and STM32 based PLC as the controller. This final project will add function ladder diagram using the same softwrare like before, Visual Basic.NET.

     The result of this final project is a software that work as graphical interface between user and PLC in designing ladder diagram and as display the input and output, as a ladder diagram compiler that will change to ladder opcode and instruction list, and try any kind of ladder diagram's function.

Keyword: ladder diagram*, ladder opcode***,** ***Instruction List***, **Visual Basic . Net**