The .Beer Language for Arduino

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STUDENT REPORT

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Title:
The .Beer language for Arduino

Theme:
Design, definition and implementation of programming languages

Project period:
02/02/2015
27/05/2015

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No. printed Copies: 7
No. of Pages: 126
No. of Appendix Pages: 43
Total no. of pages: 169
Completed: 27/05/2015

Synopsis:

The goal for this project is to design and implement a language for the Arduino, which is targeted for students and programming beginners. The project group had varying experience with Arduino, hence having different ideas about what features the new language should provide. These were analysed and evaluated by means of some language criteria. This analysis laid the foundation of the .Beer language.
This report describes the process from ideas and theory into the final language, over design, implementation and finally testing of the language.
The compiler has been developed using ANTLR to generate scanner and parser. The compiler is made by implementing multiple listeners and a walker to traverse the abstract syntax tree multiple times.
The .Beer language simplifies some complicated operations when working with data and pins on the Arduino. The details, that complicates these operations, are handled by the compiler.

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1. Project introduction

This is an introduction.

Here is the initializing problem statement:

1.1 Initializing problem statement

How is it possible to establish a protocol that can transmit the information between the nodes in a wireless mesh network and transport information to a destination?

It is a good question and we will analyse it.

Part I

Analysis

The analysis will discuss and look into the different aspects of the initializing problem formulation and the topics therein. The sections in this chapter blah-blablah..

2. Context

3. Technologies

We shall look at some existing technologies now.

3.1 Mesh networks

3.2 Wireless communication

3.3 Communication protocols

4. Problem Statement

Very good problem statement for you, my friend. Special prize.

Make a good sending data network for arduino.

Part II

Implementation

5. Theory

6. Design

7. Implementation

8. Test

Part III

Conclusion

9. Reflection

oh..

9.1 What have we done!?

10. Summary

ok..

10.1 It ended like this

11. Future Work

Here's what's missing..

11.1 To be done

Part IV

Appendix