Software Development IDE: Requirements Document (version 1.0)

Project: CS478 IDE

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1. Introduction

This document contains the system requirements for CS478 IDE. These requirements have been derived from several sources, including the class interview, Project2014.docx, and LanguageBasics.docx.

1.1 Scope of the Product

This product will be an integrated development environment that will be used as a learning aid for beginner programmers. It will be an interactive environment that will not use a traditional text editor but will use a selection of options to construct a program.

1.2 Business Case for the Product

This product is required so Computer Science and Computer Information Systems students will have a learning aid for beginner programming. Students need an environment to learn the basics without needing to learn language specific syntax.

1.3 Overview of the Requirements Document

This product will fulfill the following requirements:

* Have a GUI interface
* Allow multiple languages to be defined
* Compile and execute a program
* Have self-contained programs
* Create programs with hotkeys or selections
* Support loading and saving user files

2. General Description

This section will give the reader an overview of the project, including why it was conceived, what it will do when complete, and the types of people we expect will use it. We also list constraints that were faced during development and assumptions we made about how we would proceed.

2.1 Product Functions

This product will load and save user files, load language definitions, create programs, and compile and execute programs.

2.2 User Characteristics

The users of the finished product will be professors and students of Computer Science or Computer Information Systems who are either teaching or learning beginner level programming. The students will not need much experience with programming to be able to use the product to program.

3. Specific Requirements

This section of the document lists specific requirements for CS478 IDE. Requirements are divided into the following sections:

1. User requirements. These are requirements written from the point of view of end users, usually expressed in narrative form.
2. System requirements. These are detailed specifications describing the functions the system must be capable of doing.
3. Interface requirements. These are requirements about the user interface, which may be expressed as a list, as a narrative, or as images of screen mock-ups.

3.1 User Requirements

Users must be able to use hotkeys and/or menu buttons to use features such as open/save a file, load and manage language definitions, create statement templates to be filled in, and compile and execute programs. They must also be able to fill in statement templates and have popup boxes to inform them of errors and actions.

3.2 System Requirements

The product will most likely require the system to have the latest version of Java which it will use both to run the product as well as compile and execute the programs.

3.3 Interface Requirements

The product will allow users to use hotkeys or menu items to use features and will have resizable panels including an output panel, a list of programs/modules, and an area to view and edit the program (through selecting empty boxes to fill in expressions).