Module Interface Specification for ProgName

Team #, Team Name

Student 1 name

Student 2 name

Student 3 name

Student 4 name

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1 Revision History

Date	Version	Notes
Date 1	1.0	Notes
Date 2	1.1	Notes

2 Symbols, Abbreviations and Acronyms

See SRS Documentation at [give url —SS]
  [Also add any additional symbols, abbreviations or acronyms —SS]

Contents

3 Introduction

The following document details the Module Interface Specifications for [Fill in your project name and description —SS]

Complementary documents include the System Requirement Specifications and Module Guide. The full documentation and implementation can be found at .... [provide the url for your repo —SS]

4 Notation

[You should describe your notation. You can use what is below as a starting point. —SS]

The structure of the MIS for modules comes from **?**, with the addition that template modules have been adapted from **?**. The mathematical notation comes from Chapter 3 of **?**. For instance, the symbol := is used for a multiple assignment statement and conditional rules follow the form $(c_1 \Rightarrow r_1 | c_2 \Rightarrow r_2 | ... | c_n \Rightarrow r_n)$.

The following table summarizes the primitive data types used by ProgName.

Data Type	Notation	Description
character	char	a single symbol or digit
integer	$\mathbb{Z}$	a number without a fractional component in (-∞, ∞)
natural number	$\mathbb{N}$	a number without a fractional component in [1, ∞)
real	$\mathbb{R}$	any number in (-∞, ∞)

The specification of ProgName uses some derived data types: sequences, strings, and tuples. Sequences are lists filled with elements of the same data type. Strings are sequences of characters. Tuples contain a list of values, potentially of different types. In addition, ProgName uses functions, which are defined by the data types of their inputs and outputs. Local functions are described by giving their type signature followed by their specification.

5 Module Decomposition

The following table is taken directly from the Module Guide document for this project.

Level 1	Level 2
Hardware-Hiding Module	
Behaviour-Hiding Module	Pot Dropping Input Module
	Pot Dropping Stepper Module
	Pot Dropping Output Module
	Conveyor Input Module
	Conveyor Movement Module
	Tray Dispenser Input Module
	Tray Dispenser Gantry Module
	Tray Dispenser Raising Module
	Tray Dispenser Output Module
	Verification Output Module
Software Decision Module	Pot dropping Position Module
	Verifications Analysis Module
	Communication Module
	Front End Module

Table 1: Module Hierarchy

6 MIS of Pot Dropping Input Module[Module Name —SS]

[Use labels for cross-referencing —SS]

[You can reference SRS labels, such as R??. —SS]

[It is also possible to use LaTeXfor hypperlinks to external documents. —SS]

6.1 Module

[Short name for the module —SS]

6.2 Uses

6.3 Syntax

6.3.1 Exported Constants

6.3.2 Exported Access Programs

Name	In	Out	Exceptions
[accessProg —SS]	-	-	-

6.4 Semantics

6.4.1 State Variables

[Not all modules will have state variables. State variables give the module a memory. —SS]

6.4.2 Environment Variables

[This section is not necessary for all modules. Its purpose is to capture when the module has external interaction with the environment, such as for a device driver, screen interface, keyboard, file, etc. —SS]

6.4.3 Assumptions

[Try to minimize assumptions and anticipate programmer errors via exceptions, but for practical purposes assumptions are sometimes appropriate. —SS]

6.4.4 Access Routine Semantics

[accessProg —SS]():

- transition: [if appropriate —SS]

- output: [if appropriate —SS]

- exception: [if appropriate —SS]

[A module without environment variables or state variables is unlikely to have a state transition. In this case a state transition can only occur if the module is changing the state of another module. —SS]

[Modules rarely have both a transition and an output. In most cases you will have one or the other. —SS]

6.4.5 Local Functions

[As appropriate —SS] [These functions are for the purpose of specification. They are not necessarily something that is going to be implemented explicitly. Even if they are implemented, they are not exported; they only have local scope. —SS]

7 MIS of Pot Dropping Stepper Module[Module Name —SS]

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[Short name for the module —SS]

7.2 Uses

7.3 Syntax

7.3.1 Exported Constants

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8 MIS of Pot Dropping Output Module[Module Name —SS]

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8.1 Module

[Short name for the module —SS]

8.2   Uses

8.3   Syntax

8.3.1   Exported Constants

8.3.2   Exported Access Programs

Name	In	Out	Exceptions
[accessProg —SS]	-	-	-

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9 MIS of Conveyor Input Module[Module Name —SS]

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9.2 Uses

9.3 Syntax

9.3.1 Exported Constants

9.3.2 Exported Access Programs

Name	In	Out	Exceptions
[accessProg —SS]	-	-	-

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10 MIS of Conveyor Movement Module[Module Name —SS]

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10.1 Module

[Short name for the module —SS]

10.2 Uses

10.3 Syntax

10.3.1 Exported Constants

10.3.2 Exported Access Programs

Name	In	Out	Exceptions
[accessProg —SS]	-	-	-

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11 MIS of Tray Dispenser Input Module

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11.1 Module

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11.2 Uses

11.3 Syntax

11.3.1 Exported Constants

11.3.2 Exported Access Programs

Name	In	Out	Exceptions
[accessProg —SS]	-	-	-

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12 MIS of Tray Dispenser Gantry Module[Module Name —SS]

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12.1 Module

[Short name for the module —SS]

12.2 Uses

12.3 Syntax

12.3.1 Exported Constants

12.3.2 Exported Access Programs

Name	In	Out	Exceptions
[accessProg —SS]	-	-	-

12.4 Semantics

12.4.1 State Variables

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12.4.4 Access Routine Semantics

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- output: [if appropriate —SS]

- exception: [if appropriate —SS]

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13 MIS of Tray Dispenser Raising Module[Module Name —SS]

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13.1 Module

[Short name for the module —SS]

13.2 Uses

13.3 Syntax

13.3.1 Exported Constants

13.3.2 Exported Access Programs

Name	In	Out	Exceptions
[accessProg —SS]	-	-	-

13.4 Semantics

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14 MIS of Tray Dispenser Output Module[Module Name —SS]

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14.1   Module

[Short name for the module —SS]

14.2   Uses

14.3   Syntax

14.3.1   Exported Constants

14.3.2   Exported Access Programs

Name	In	Out	Exceptions
[accessProg —SS]	-	-	-

14.4   Semantics

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15 MIS of Verification Output Module[Module Name —SS]

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15.1 Module

[Short name for the module —SS]

15.2 Uses

15.3 Syntax

15.3.1 Exported Constants

15.3.2 Exported Access Programs

Name	In	Out	Exceptions
[accessProg —SS]	-	-	-

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16 MIS of Pot Dropping Position Module[Module Name —SS]

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[Short name for the module —SS]

16.2 Uses

16.3 Syntax

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Name	In	Out	Exceptions
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17 MIS of Verification Analysis Module[Module Name —SS]

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17.3   Syntax

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18 MIS of Communication Module[Module Name — SS]

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18.2 Uses

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19 MIS of Front End Module[Module Name —SS]

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19.1 Module

[Short name for the module —SS]

19.2 Uses

19.3 Syntax

19.3.1 Exported Constants

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Name	In	Out	Exceptions
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20   Appendix

[Extra information if required —SS]