**Proiect Arhitectura Calculatoarelor**

**Requirements document**

Table of Contents

[Chapter 1: Definitions and Explanations. 3](#_Toc534624631)

[Chapter 2: Basic requirements 4](#_Toc534624632)

[Chapter 3: Added requirements 5](#_Toc534624633)

# Chapter 1: Definitions and Explanations.

Each project made in any domain, must start from somewhere. The most basic and usual place to start is by saying what you want the project to do as a concept. i.e. **I want this project to do this**.

The statement above can be translated into a basic requirement of the project, thus a basic definition of what a requirement is can be extracted. **A requirement represents a statement that contains an explanation for a specific feature or a “must have” feature of a certain project or task that needs to be present in the final state**.

Taken the example provided (I want this project to do this), an extracted requirement from this can be: “**The application shall be able to support this feature”** or **“The application shall support the functionality of the feature present in document X”.**

The requirements in the engineering domain, must be written in accordance with the standard set by IREB consortium. As one of the purposes of this project aims to familiarize the students to the V-Model process, the requirements will be created using the following statement:

# Chapter 2: Basic requirements

The SW application shall use the Assembler and Sequencer modules to be complete.

The SW application shall support a specific assembly code text file as input.

The SW application shall be able to decode the input file using the Assembler module.

The SW application shall be able to encode the input file using the Assembler module.

The SW application shall be able to perform the code operations stated in the input file.

The SW application shall respect the software architecture layout specified in the SW Design document.

The SW application shall be able to support the basic assembly code instructions provided in “ProiectAC\_Part1\_uC\_Arch&Instructions.pdf” file.

The SW application shall support the instruction format specified in “ProiectAC\_Part1\_uC\_Arch&Instructions.pdf” file, for each instruction class.

The SW application documentation shall contain a list of all supported assembly code instructions with their respective codifications.

The SW applications documentation shall contain a unique codification for each assembly code instruction.

# Chapter 3: Added requirements

The SW application shall be able to allow the user to change registry data on-the-fly

The SW application shall be able to control the simulation flow such as start/stop

The SW application shall be able to allow visualization of the main memory