UNIVERSITY "POLITEHNICA" OF BUCHAREST
FACULTY OF ENGINEERING IN FOREIGN LANGUAGES
Software Engineering M.Sc.

SOFTWARE ENGINEERING

Topic:

Designing an application that converts University grades

between Romanian and American education systems.

(SOFTWARE REQUIREMENTS SPECIFICATION)

PROFESSOR:
Sl. Dr. Ing. NICOLAE GOGA

ASSISTANTS:
Ing. ALEXANDRA TODIRUTA
Ing. LUCIAN PESTRITU

STUDENT:
MAME AMATH DIAW

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Delivery Report

(Will be delivered along with the project)

Name	Group	Project implementation [%, reason]	Signature
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Delivery date:

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Requirements Analysis

According to the IEEE STD-830-1993, *IEEE Recommended Practice for Software Requirements Specification*.

1. Introduction

Grading systems vary significantly from country to country. The purpose of a University Grading Policy is to ensure that:
- grading practices throughout the University reflect appropriate academic standards;
- the evaluation of student performance is made in a fair and objective manner against these academic standards;
- the academic standing of every student can be accurately assessed even when courses have been taken in different divisions of an university and evaluated according to different grade scales.

Within the field of international education, the interpretation of foreign grades into national ones can be a very sensitive issue. Taking Romania and the United States as an example, the distribution of grades tend to be different.
In Romania the grades are between 1 and 10 and the average is calculated using the AVG formula. The US uses the so called Grade Point Average (GPA) system. The grades are from 0 - 4 and have an associated letter A (4), B (3), C (2), D (1), E/F (0). The GPA is calculated using the GPA formula.
This can be a major issue for international students returning after a study period abroad and for university staff required to assess the credentials of foreign applicants.

1.1. Purpose

The purpose of this SRS (Software Requirements Specification) document is to define the functional requirement for a system that converts university grades between Romanian and American education systems. This document describes the features that are included in this project, its user interface, and its functionality.

1.2. Scope

This document specifies many requirements that are common to data conversion. However, it considers the full requirements for credits and grade allocation for international students.

The scope of this document is limited to requirements for the grade and credit allocation. The requirements defined are those necessary to describe the purposes of comparing two different university grading system.

1.3. Definitions, Acronyms and Abbreviations

The following table defines terms and abbreviations used in this document.

Term	Definition
ANSI	American National Standards Institute
IEEE	Institute of Electrical and Electronics Engineers

1.4. References

The following documents where used in the preparation of this specification:
The European credit transfer system (ects) and the US grading system.

1.5. Structure

Describe the structure of the document, with one phrase for each chapter.

2. General description

The problem that the grade conversion system will solve is to produce needed information to:
- reflect appropriate academic standards;
- evaluate student performance in a fair and objective manner against these academic standards;
- ensure that the academic standing of every student can be accurately assessed even when courses have been taken in different divisions of an university and evaluated according to different grade scales.

2.1. Product Description

The system is expected to be a university grade and credit converter for international students and university staff required to assess the credentials of foreign applicants. It will build associations between data about credit and grades.

2.2. Product Functions

This section identifies the functions that users and interfacing systems can use, at the general level. The system will have functions that allow users to convert the credits and the grades that they need.

2.3. User description

A number of different types of users (international students and university staff) will make use of the system. Their knowledge level and skills will be diverse, and their ability to enter specific data must be carefully controlled in order to maintain safety.

2.4. Constraints

Hardware limitations, interfaces with other applications, application importance (if the application is critical or not, if the application must always generate correct results), functions depending on the legislation specified in chapter 1.5, minimum/maximum number of users, parallelism.

2.5. Assumptions and Dependencies

Describe the machine on which the application will run, the dependencies of the data base systems/ program libraries/existing programs.

3. System Requirements

This section documents detailed requirements for the system and its internal functions and features as well as interactions with other systems. Some requirements are derived from the consequences of other requirements rather than specific features requested by users.

3.1. External Interface Requirements

This section identifies interfaces that are at the boundary of the university grade converter system and other systems, and the changes that will be necessary to those interfaces to support it.

User interfaces:
Go to main page,
Put credit and grade,
Calculate or Clear date to start again.

Hardware interfaces:
There won’t be a hardware interface part.

Software (libraries or other parts/programs) interfaces:
We will use JavaScript language.

Communications interfaces:
There won't be a hardware interface part.

3.2. Functional Requirements

These functional requirements capture the intended behavior of the system expressed as functions that are required to perform. It will be useful to distinguish between the baseline functionality necessary for any convertor system and features that differentiate the system to requirements for the grade and credit allocation.

The system shall provide appropriate users possibilities to successfully enter covert their data. Therefore the user shall be able to:
· enter data (university grades),

· identify and determine missing data

· eliminate and continue system process.

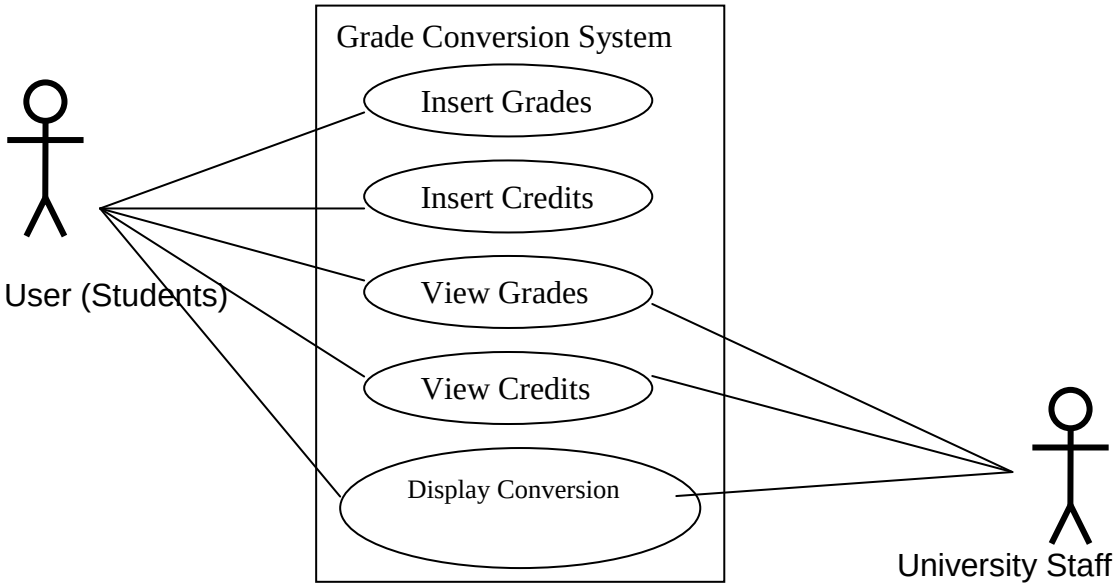

Figure 3.2.1: Use Case Diagram of our Grade Conversion System.

3.3. Performance Requirements

Clear values regarding the measurable characteristics of the system (e.g. number of users, number of frames per second, etc.)

3.4. Design Constraints

The compliance of the rules described in the normative documents (see chapter 1.5)
The compliance of the hardware constraints.
The compliance of other constraints.

3.5. Software System Attributes

Trust
Reliability
Security
Maintenance
Portability
Fault tolerance

3.6. Other System Requirements