

**CodeKataBattle project by Russo Mario  
and Picone Paolo**



**POLITECNICO**  
MILANO 1863

# **Requirement Analysis and Specification Document**

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# 1 Introduction

## 1.1 Purpose

The motivation behind the existence of the CodeKataBattle platform is to provide students with a dedicated platform for practicing their programming skills. The platform aims to create a competitive environment where teams of students can participate in programming tournaments and solve programming challenges.

By offering a platform specifically designed for programming practice, CodeKataBattle aims to provide students with a structured and engaging way to improve their coding abilities. The competitive nature of the platform adds an extra layer of motivation and excitement, encouraging students to push their limits and strive for excellence.

Overall, the motivations behind the existence of the CodeKataBattle platform are to create a dedicated space for programming practice, foster healthy competition among students, and provide a means for tracking and improving programming skills.

### 1.1.1 Goals

[G1] Educator can create a tournament [G2] Educator can create battles for the tournament [G3] Student can compete in a tournament [G4] Team of students can compete in a battle [G5] Student is evaluated based on the performance in the battle [G6] Student are notified about upcoming tournaments

## 1.2 Scope

The scope of this project is to develop a platform (CodeKataBattle) that is intended to be used by students for practicing their programming skills. The platform is used in a competitive setting where teams of students compete against each other in tournaments where they are given programming problems to solve. The platform is equipped with a ranking system that ranks that assigns... Additionally, the platform incorporates a ranking system that assigns scores to participants based on their performance in the tournaments. This ranking system not only adds a competitive element but also allows students to track their progress and compare their skills with others. This can be a valuable tool for self-assessment and identifying areas for improvement.

## 2 Overall Description

Here you can see how to include an image in your document.

Here is the command to refer to another element (section, figure, table, ...) in the document: *As discussed in Section 1.2 and as shown in Figure 1*, .... Here is how to introduce a bibliographic citation [1]. Bibliographic references should be included in a .bib file.

Table generation is a bit complicated in Latex. You will soon become proficient, but to start you can rely on tools or external services. See for instance this <https://www.tablesgenerator.com>.

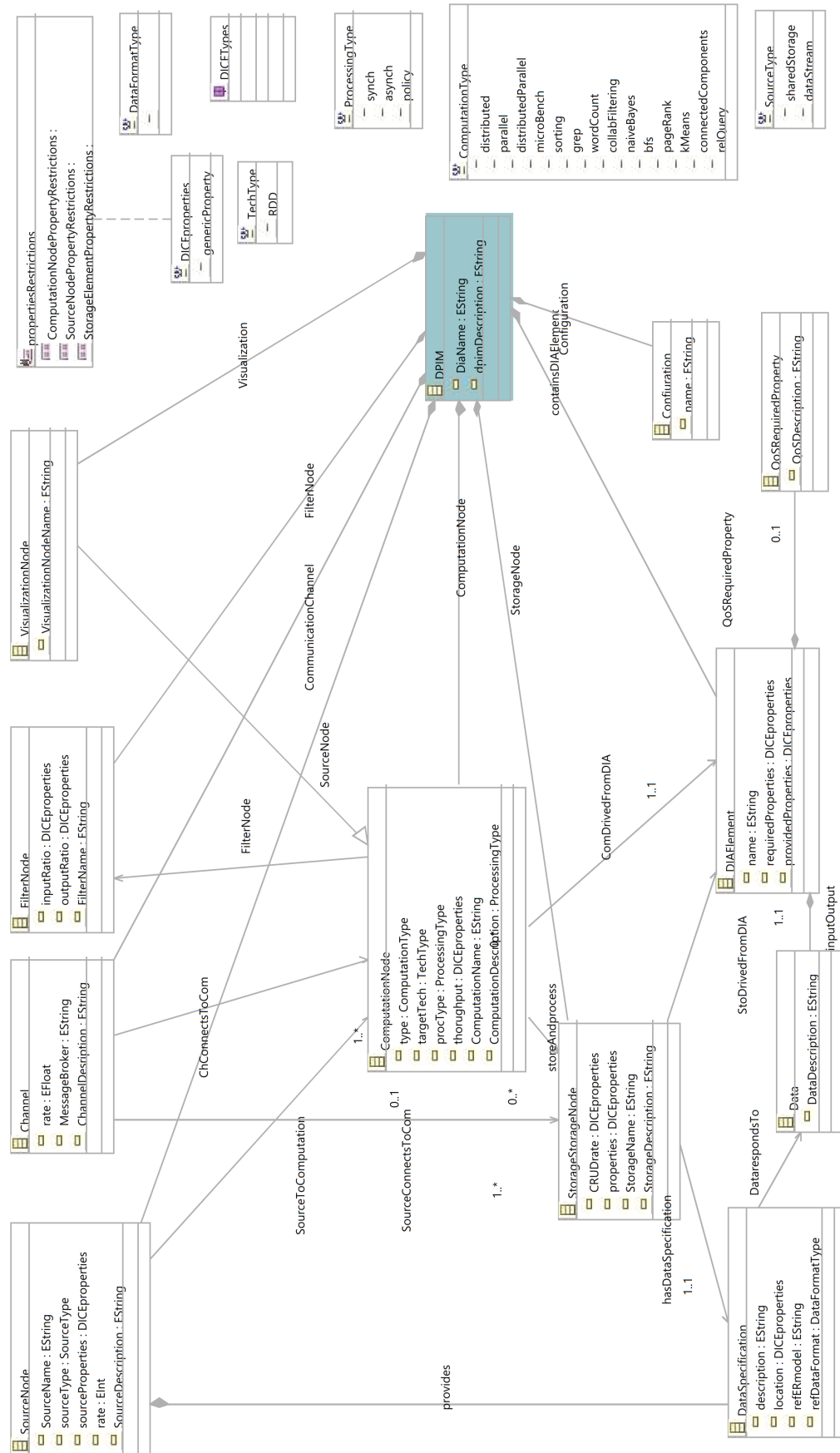


Figure 1: DICE DPIM metamodel.

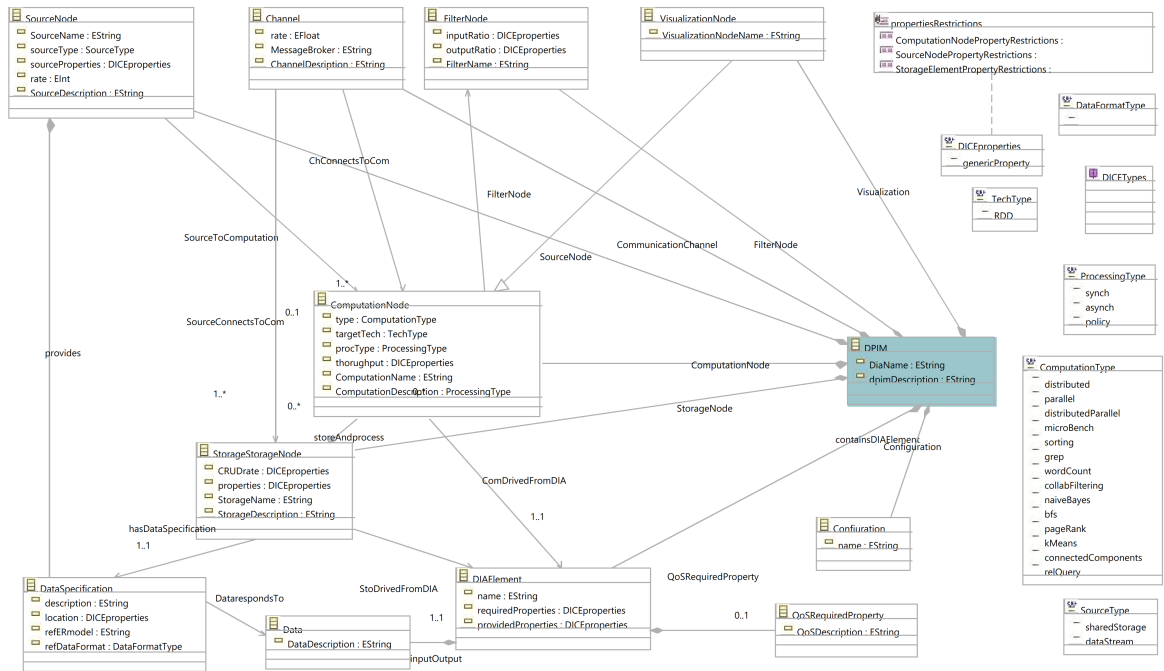


Figure 2: DICE DPIM metamodel in portrait form.



### **3 Specific Requirements**

Organize this section according to the rules defined in the project description.

## **4 Formal Analysis Using Alloy**

Organize this section according to the rules defined in the project description.

## 5 Effort Spent

Provide here information about how much effort each group member spent in working at this document. We would appreciate details here.

## References

- [1] S. Bernardi, J. Merseguer, and D. C. Petriu. A dependability profile within MARTE. *Software and Systems Modeling*, 10(3):313–336, 2011.