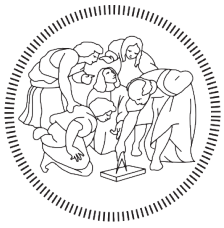
Tetris Project for AOS

Design Document for the Tetris project for the course "Advanced Operating System".

Authors:
Accordi Gianmarco
Chierici Franco



POLITECNICO
MILANO 1863
Dipartimento di Elettronica, Informazione e Bioingegneria
Politecnico di Milano
Italy
29/03/2021

Contents

1 Introduction

The scope of this document is to explain the design choice we have have made during the development of our project: a version of Tetris working from a terminal console, that is executed on an external microcontroller integrated circuit. It will also contains all the reference to better understand the structure of the code.

2 Interfaces

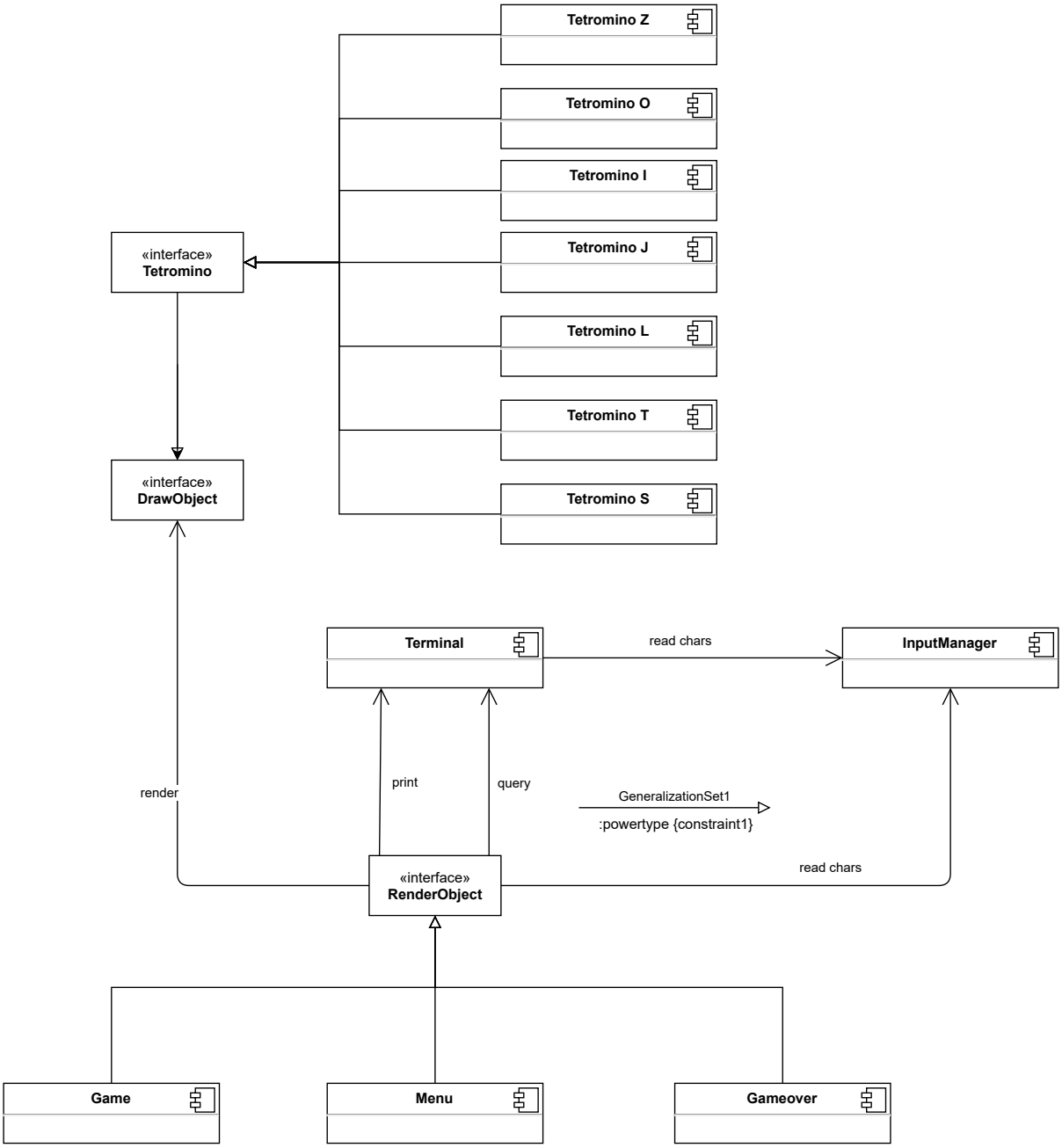


Figure 1: Interfaces Diagram of the project.

3 Main Loop

```
for processorID in processorIDs do
    Synchronized with MPI_Barrier(MPI_COMM_WORLD);
    if myID==processorID then
        Allocate enough buffer in order to receive from each processor information about the
         amount of data it will send;
    else
        Prepare the information about the amount of data to be sent;
    end
    Perform an MPI_Gather;
    if myID==processorID then
        Allocate enough buffer, based on the information received in the previous gather, in order
         to receive from each processor the data it will send;
    else
        Prepare the data to be sent;
    end
    Perform an MPI_Gatherv;
end
```

Algorithm 1: Communication paradigm.

4 Usage and Setup

References