



POLITECNICO DI MILANO  
SOFTWARE ENGINEERING II PROJECT:  
POWERENJOY

# Design Document

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## **Abstract**

The main purpose of this document is to give a specification of the requirements that our system has to fulfill adopting the IEEE-830 standard for RASD documentation. It also introduces functional and non-functional requirements via high level specification of the system. In the last part a formal model is presented using Alloy.

The information contained in this document is intended for the stakeholders and developers: for the stakeholders this document presents an useful description to understand the project development, meanwhile for the developers it's quite a comfortable way to match the stakeholders' requests and the proposed solutions.

## Part I

# Introduction

## Purpose

[illegible]



## Scope

[illegible]

# Document Structure

[illegible]

**Part II**

**Architectural Design**

## Overview: High level components and their interaction

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## Component view

[illegible]

## Deployment view

[illegible]

## Runtime view

[illegible]



## Component Interfaces

[illegible]

# Selected architectural styles and patterns

[illegible]

## Other design decisions

[illegible]

**Part III**

**Algorithm design**

[illegible]

## Part IV

# User interface design

[illegible]

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## Part V

# Requirements Traceability

[illegible]

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Part VI

**Architectural Design**

[illegible]

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**Part VII**

**Architectural Design**

[illegible]



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# Appendix A: Used Tools

## A.1 $\text{\LaTeX}$

Used to format and redact this document

## A.2 *git*

Used as version control system in order to lead development

## A.3 *draw.io*

Used to draw mockups and diagrams

## A.4 Alloy analyzer

Used to analyze and verify our specification

# Appendix B: Hours of work

These are the hours of work spent by each group member in order to redact this document:

- Ruaro Nicola: 0 hours
- Gregori Giacomo: 0 hours
- Total worktime: 0 hours

# Appendix C: Revisions

These sections will be eventually redacted during future post-release updates in order to approach the RASD modifiability providing a comfortable and highly effective way to trace changes:

**C.1 Changed assumptions**

**C.2 Removed goals**

**C.3 Modified use-cases**

**C.4 Modified diagrams**

# Bibliography

- [1] IEEE Std 830, *Recommended Practice for Software Requirements Specifications*, 1998
- [2] Luca Mottola and Elisabetta Di Nitto, *Software Engineering 2: Project goal, schedule and rules*, 2016