Painkiller Injection System

Traceability

CS132: Software Engineering

Group 15
Authors: Yuhang Zhu, Yunfei Wang, Shunkang Jia

Contents

1 System Architecture

The system architecture is shown below:
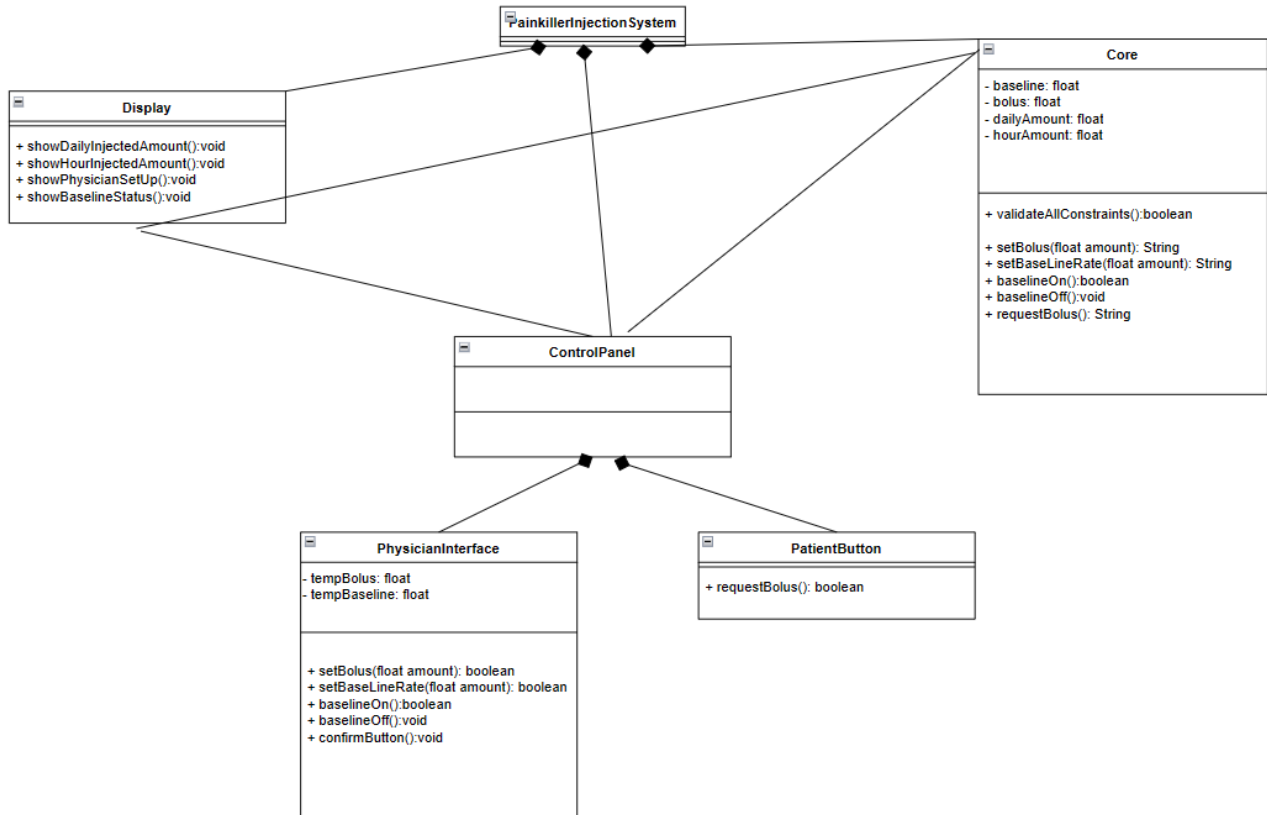
Figure 1: System Architecture

2 Software Traceability

Requirement	Implemented by Specification	Validated by Test
R1 (Physician UI)	S1, S3	T1.1, T1.2, T1.3
R1.1	S1.1, S1.2, S1.3, S1.4, S3.2	T1.1, T1.2, T2.1, T3.1, T3.2
R1.1.1	S1.1, S3.2	T1.1.1, T1.2.1, T2.1, T3.1.1, T3.2.1, T3.2.3
R1.1.2	S1.2, S3.2	T1.1.2, T1.2.2, T2.1, T3.1.2, T3.2.2, T3.2.3
R1.1.3	S1.3, S3.2	T1.1.3, T1.2.4, T2.1, T3.2.3
R1.1.4	S1.4, S3.2	T1.1.4, T1.2.5, T2.1, T3.2.3
R1.2	S1.5, S1.6, S3	T1.1, T1.2, T2.1, T3.1, T3.2
R1.2.1	S1.5, S1.6, S3.1, S3.2	T1.2.9, T1.2.10, T1.2.11, T3.1.3, T3.1.5, T3.1.6
R1.2.2	S3.1, S3.2	T1.1.1, T1.2.1, T3.1.1, T3.2.1, T3.2.3, T1.1.2, T1.2.2, T2.1, T3.1.2, T3.2.2, T1.2.9, T1.2.10, T1.2.11, T3.1.3, T3.1.5, T3.1.6
R1.2.3	S3.1, S3.2	T1.1.3, T1.2.4, T2.1, T3.2.3, T1.1.4, T1.2.5, T1.2.9, T1.2.10, T1.2.11, T3.1.3, T3.1.5, T3.1.6
R2 (Patient Button)	S2, S3	T1.3
R2.1	S2.1, S3.2	T1.3.1
R3 (Injection System Core)	S1.1, S1.2, S3.1, S3.2	T1.1, T1.2, T1.3, T2.1, T3.1, T3.2
R3.1	S1.1, S1.2, S3.2	T1.1.5, T1.2.9, T1.3.1, T2.1, T3.1.6, T3.2.1, T3.2.2, T3.2.3
R3.1.1	S1.1, S3.2	T1.1.5, T1.2.9, T1.3.1, T2.1, T3.1.6, T3.2.1, T3.2.2, T3.2.3
R3.1.2	S1.2, S3.2	T1.1.5, T1.2.9, T1.3.1, T2.1, T3.1.6, T3.2.1, T3.2.2, T3.2.3
R3.2 (Validate)	S3.2, P1 (Uppaal part)	T2.1, T3.2
R3.2.1	S3.2	T2.1, T3.2.1, T3.2.2, T3.2.3
R3.2.2	S3.2	T2.1, T3.2.1, T3.2.2, T3.2.3
R3.2.3	S3.2	T2.1, T3.2.1, T3.2.2, T3.2.3
R3.2.4	S3.2	T2.1, T3.2.1, T3.2.2, T3.2.3
R4 (Additional Feature)	S1.5, S1.6, S3.1	T2.1, T3.2
R4.1	S1.5, S1.6, S3.1	T2.1, T3.2
R4.1.1	S1.5, S1.6, S3.1	T2.1, T3.2.1, T3.2.2, T3.2.3
R4.1.2	S1.5, S1.6, S3.1	T2.1, T3.2.1, T3.2.2, T3.2.3