Software Validation Test Specification

Dinosaurio de Google

Sistemas Embebidos

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Test Log

Functionality	Baseline Reference	Target Software Release Version
Dinosaurio de Google	1	1
Software Tester	Department	Date of Test Completion
Tyler Ruiz	Ingeniería en Computación	2020-27-05

List of Changes

Ver. **(X.Y)**	**Date** **(YYYY-MM-DD)**	**Maturity** **(Draft/ Valid/ Withdrawn)**	**Author** **(Name/Departm.)**	**Description**
1.0	2020-27-05	Draft	Jesús González	Creación

Content

1 Introduction

Se creara a un jugador del Dinosaurio de Google, capaz de presionar la tecla de espacio para realizar los saltos, mientras que un LDR sera usado como sensor para determiner en que momento presionar la tecla y brincar.

1.1 Change Description

Se agregó la función de presionar la tecla de espacio para realizar los saltos, un LDR usado como sensor para determiner en que momento presionar la tecla y brincar, el servomotor para ser activado cuando el sensor detecte un obstáculo, se implemento en un Sistema operative de tiempo real

1.2 Solution Approach

Utilizando la Kinetis KL25Z, un LDR y un servomotor

2 Abbreviations and Definitions

SWDP	Software Development Plan
SWAD	Software Architecture and Design Document
SDD	Software Design Document
SRS	Software Requirement Specification
STS	Software Test Strategy
MTS	Module Test Specification
ITS	Integration Test Specification
VTS	Validation Test Specification

Project specific abbreviations and definitions:

CAN	Controlled Area Network
ECU	Electronic Control Unit
SW	Software
PIT	Programmable interval timer
UART	Universal Asynchronous Receiver-Transmitter

3 References

No.	Document Name	Date/ Revision	Link (if applicable)
R1	Manual de Usuario de Kinetis KL25Z	2.0	n/a
R2	Guía de Inicio para la KL25Z	1.0	n/a

4 Test case formalism

4.1 Test case number

Numbering system	Positive Integer numbers starting with 1 are used to identify the Test Cases
Inserted test cases	The steps of each Test Cases use also positive integer numbers. ie, 1.2 indicates Test Case #1, step 2.

4.2 Variant Management

Column V	**Associated variant**
A	All variants
U	US variant
E	European variant

4.3 Regression Tests Identifier

Column R	Definition	When to be executed
	Nominal Test Case	Test cases for tests of modified or new SW modules/files
R	Regression Tests Cases	Subset of test cases for regression tests of unmodified / unaffected SW modules

4.4 Test Type Identifier

Column N	Meaning
	Positive Tests
N	Negative tests for checking robustness

5 Functionality References & Traceability

5.1 Functionality Overview

Description of functionality	Un LDR detectara un obstáculo dentro del juego del dinosario de google y después se activara el servomotor
Reference to SRS / Version	v.1.0
Rating [when risk analysis required]	Medium
Test completeness criteria	El servomotor realiza un presionado a la tecla de espacio y el dinosaurio dentro del juego brinca.

5.2 Functionality Overview

Description of functionality	Un sistema operativo en tiempo real estara realizando el llamado de la verificación de la maquiná de estados
Reference to SRS / Version	v.1.0
Rating [when risk analysis required]	Medium
Test completeness criteria	Dependiendo de si hay obstaculos o no el dinosaurio realizara las acciones necesarias

5.3 Functionality Overview

Description of functionality	El LDR enviará una señal a la Kinetis cuando detecte un obstaculo.
Reference to SRS / Version	v.1.0
Rating [when risk analysis required]	Medium
Test completeness criteria	Se activará un salto del servomotor.

5.4 Functionality Overview

Description of functionality	Al detectar una señal del LDR la kinetis enviara una señal al servomotor para activarse.
Reference to SRS / Version	v.1.0
Rating [when risk analysis required]	Medium
Test completeness criteria	El servomotor presionará la tecla de espacio en el momento adecuado.

6 Test Environment

This chapter defines the test environment. In case of several specific configurations the description effort can be reduced this way.

6.1 Hardware

No.	Description
1	Kl25z

6.2 Software

No.	Description
S1	MCUXpresso IDE

6.3 Test Environment

No.	HW Configuration	SW Configuration	EEPROM-Parameter	Description
1	kl25z	sdk kl25z	N/A	Obtener módulos SDK para configurar la placa con un scheduler.

6.4 Default Preconditions

kl25z, sdk kl25z, MCUXpresso IDE, scheduler

6.5 Relevant Input & Output Definitions

Inputs and outputs are specified within the procedure of each test case.

Test Case Specification (Systematic and Intuitive)

6.6 Test Procedures

Test Environment				1			
Test Configuration				kl25z, sdk kl25z. MCUXpresso IDE, scheduler			
TC-Identifier	**V**	**R**	**N**	**Description**	**Precondition**	**Test procedures**	**Expected results**	**Ok/ Nok** **Comments /description**
1	A			Se iniciara el juego del dinosaurio y el LDR detectara un obstáculo.	N/A	N/A	El servomotor presiona la tecla de espacio y se realiza un salto evitanto el obstáculo	OK (Pass)
2	A	R		Iniciar el juego y detectar 3 obstaculos.	N/A	N/A	El dinosaurio evitara cada uno de los 3 obstáculos	OK (Pass)
3	A		N	Iniciar el juego y obtener 300 puntos.	N/A	N/A	El LDR enviará las señales de cada uno de los obstáculos y el servomotor activara el salto para esquivar los obstáculos hasta conseguir los 300 puntos.	OK (Pass)

7 Test Report

SW VALIDATION TEST REPORT	Date (dd/mm/yyyy)
	2020-27-05

PRODUCT

Project name	**Práctica Dinosaurio de Google**
Functionality	**Dinosaurio de Google**
SW Tested Baseline (ccaavtMMmm)	1
Test specification name	**Sistemas embebidos**
Work Package Reference	1

TEST ENVIRONMENT

Test bench release report (link to file)	1
Test environment deviations	n/a

GENERAL TEST RESULTS

***Estimated test time** (hours):*	**1**	***Final test time** (hours):*	**1**
Existing number of tests:	**3**	***Number of planned tests*** *Subset of existing test according to STS*	**3**

Number of performed tests:	**3**	***Number of tests not done:***	**0**
Number of deviations:	**0**	***Number of failed tests:***	**0**

Test performed by (first name, last name - department)	**Test approved by** (first name, last name - department)
Tyler Ruiz/ Ingeniería en Computación	Paulo Celis/ Ingeniería en Computación

Test Status Abbreviations:	***OK***	***- test result correct (passed)***
	F	***- test failed***
	C	***- test procedure/description complaint***
	N/A	***- not applicable***

Tests not done – Reasons

Test No.	Reason
n/a	n/a

Failed Tests (default for all anomalies)

Test No.	Result Observed	CR number/ After submission to CS
n/a	n/a	n/a

Test deviations (proven incorrect/unclear test specification only)

Test No.	Wrong description	Corrected description	CR number Optional
n/a	n/a	n/a	n/a