**Software Requirement Specification**

for

Case Study #1

Enter Title Here

v01.02

1. **Project Revision**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Code Version**  **(SVN version)** | **Details** | **Programmer** |
| June 29, 2013 | v01.00 (00001) | MP1: Mealy Architecture | Ranil Montaril |
| Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. |
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1. **Project Description**

<Show a short Description of the Project demostrated in this paper. Mentioned the Chip used and the operation of the HW>

Ex:

This paper presented by the author will demonstrate a prototype of an automatic car parking system with Mealy State Machine architecture. The project will consist of proximity sensors to check the presence of a car on a particular slot. The prototype will be controlled by MCU and 3-digit seven segment display.

The state will check continuously and count how many cars not present in the slot this will show the current number of unfilled slots in the seven segment display.  State transition will be in microseconds so as to display real time numbers of unfilled slots in the parking.

1. **Conceptual Models**
   1. Functional Diagrams:



* 1. Pictorial Diagram (if applicable)



1. **Algorithm Discussion (Code Flow Chart)**



Type here a textual explanation of your Flow Chart

1. **Simulink Design <if applicable>**
   1. Simulink Block Design
   2. Block Properties
2. **Software Details**
   1. Definition of Variables

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Data Type** | **Description** |
| i16\_VoltageSense | Int16 | Monitors Vout |
| b\_PowerGood | bool | Flags for Power Good |
| u16\_OVP | UInt16 | OVP level |
|  |  |  |

* 1. SVN **Logs** (Taken from MP/CS folder under Code in Progress)

Right Click MP/CS folder, SVN Tortoise>Show Log

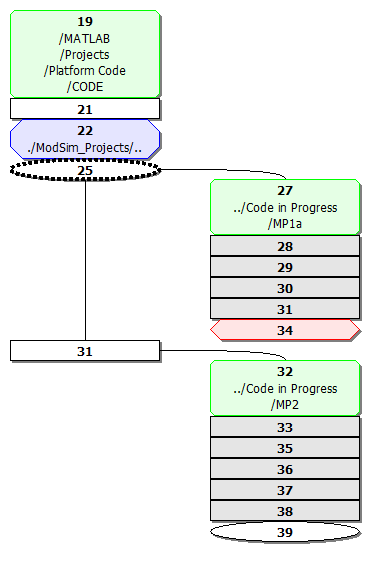
Type below all the content of the logs

|  |  |
| --- | --- |
| **Revision** | **Details** |
| 2 | $baseline\_int v00.00.01  $Change: Remove blinking 1 sec routine |
| 1 | $Base r0 |
| 0 | Add Folder Meely |

* 1. SVN Revision Graph

Right click the Code in Progress, SVN Tortoise> Revision Graph

Print Screen or save the Graph as .bmp and paste it below



* 1. MATLAB SCRIPT

function [x1,x2] = quadform(a,b,c)

d = sqrt(bˆ2 - 4\*a\*c);

x1 = (-b + d) / (2\*a);

x2 = (-b - d) / (2\*a);

end

1. **Source File Information**
2. Programming Tools

**Programming Software** : MATLAB

**Compiler Version** : v2008

1. Hex File Description

**Filename** : MP1\_BaliwasE.m

**Version No.** : Version 01.00.00

**Date of Build** : 13 November 2012

**MD5 Checksum** : 0x1BE8204B

**Size (KB)** : 168 KB

1. **Submission Checklist**

| **Description** | **Responsible** | **Done?** | **Signature** |
| --- | --- | --- | --- |
| Perform Code Review | **Name** | Choose an item. | **Name of the Leader** |
| **Name** | Choose an item. |
| **Name** | Choose an item. |
| **Name** | Choose an item. |
| **Name** | Choose an item. |
| **Name** | Choose an item. |
| Key Programmers | **Name** | |
| **Name** | |
| **Name** | |
| **Name** | |
| **Name** | |
| **Name** | |
| SRS Filename | Choose an item. | |
| Verified SVN Compliant | **Name** | Choose an item. |
| Verified Checksum | **Name** | Choose an item. |
| Updated SRS | **Name** | Choose an item. |

1. **Simulation Test Results**

<Paste Sample Simulation test result with conditions>

>> [r1,r2] = quadform(1,-2,1)

r1 = 1

r2 = 1

1. **References**

<Placed in APA format or IEEE format>.