****

# PO1\_DGC Calculator

**(Req\_PO1\_DGC\_Buzzer\_CDD)**

**Status** : **Draft**

### 

### 

### 

### **Document Status**

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Status** | **Author** | **Date** |
| V 1.0 | Draft | Areej Ayman Helal | 5/3/2020 |
|  |  |  |  |

### **History Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Author** | **Date** | **Change** |
| 1.0 | Areej Ayman Helal | 5/3/2020 | Initial creation |
|  |  |  |  |

## **Table of contents**

1. **Project Description**
2. **APIs**
3. **Global variables**
4. **SW Context Diagram**
5. **Flow Chart**

## 

## **Index of figures**

* **Figure 1 : API 1 ………………….....….…. 4**
* **Figure 2 : API 2 ...……………....… ……... 5**
* **Figure 3 : API 3 ..………....………………. 5**
* **Figure 4 : SW Context Diagram . .… … 6**
* **Figure 5 : Flow chart 1 . .……………….. 7**
* **Figure 6 : Flow chart 2 . .……………….. 7**
* **Figure 7 : Flow chart 3 . .……………….. 8**
* **Figure 8 : Reference Documents……......8**

## 

## **Project Description**

The Digital Calculator system will consist of a Power component in the APP layer to turn all the system ON whenever the ON switch is pressed.

The system starts with the Keypad\_assignment component waiting for any of the Keypad keys to get pressed. When a switch of the keypad is pressed the Keypad\_assignment component will send signals to all of the following components:

1- Math\_calc: will calculate the entered operation and send the result to the Display component.

2- Display: will display the entered first operand, operation and second operand.

3- PlayTone: will play a tune every time keypad\_assignment component is used.

**APIs:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO1\_DGC\_CDD\_Buzzer\_001 V1.0 | | |
| **Input signal** | - | **Output signal** | -Buzzer Status.  Range: [0: 1]  Unit: NA |
| **Name** | BUZZER\_SetBuzzerOn | | |
| **Description** | Turn on the buzzer by outputting a high signal on the buzzer pin | | |
| **Covers** | Req\_PO1\_DGC\_SRS\_011\_v1.3  Req\_PO1\_DGC\_SRS\_012\_v1.3 | | |
| **public/private** | Public | | |

### Figure 1

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO1\_DGC\_CDD\_Buzzer\_002 V1.0 | | |
| **Input signal** | - | **Output signal** | -Buzzer Status.  Range: [0: 1]  Unit: NA |
| **Name** | BUZZER\_voidSetBuzzerOff | | |
| **Description** | Turn off the buzzer by outputting a low signal on the buzzer pin | | |
| **Covers** | Req\_PO1\_DGC\_SRS\_011\_v1.3  Req\_PO1\_DGC\_SRS\_012\_v1.3 | | |
| **public/private** | Public | | |

### Figure 2

|  |  |  |  |
| --- | --- | --- | --- |
| **Req\_ID** | Req\_PO1\_DGC\_CDD\_Buzzer\_003 V1.0 | | |
| **Input signal** | - | **Output signal** | -Buzzer Status.  Range: [0: 1]  Unit: NA |
| **Name** | DGC\_PlayTone | | |
| **Description** | It takes the pressed key as an input and applies a different tone on each key of them whenever it’s pressed. | | |
| **Covers** | Req\_PO1\_DGC\_SRS\_011\_v1.3  Req\_PO1\_DGC\_SRS\_012\_v1.3 | | |
| **public/private** | Public | | |

### Figure 3

### **Global Variables**

**-N/A**

### 

### **SW Context Diagram**

****

### Figure 4

### **Flow Chart**

### 

### Figure 5

### 

### Figure 6

### 

### Figure 7

### 

### **Reference Documents**

|  |  |  |  |
| --- | --- | --- | --- |
| **Reference Number** | **Document Name** | **Version** | **Status** |
| 1 | GDD | 1.3 | proposed |

### Figure 8