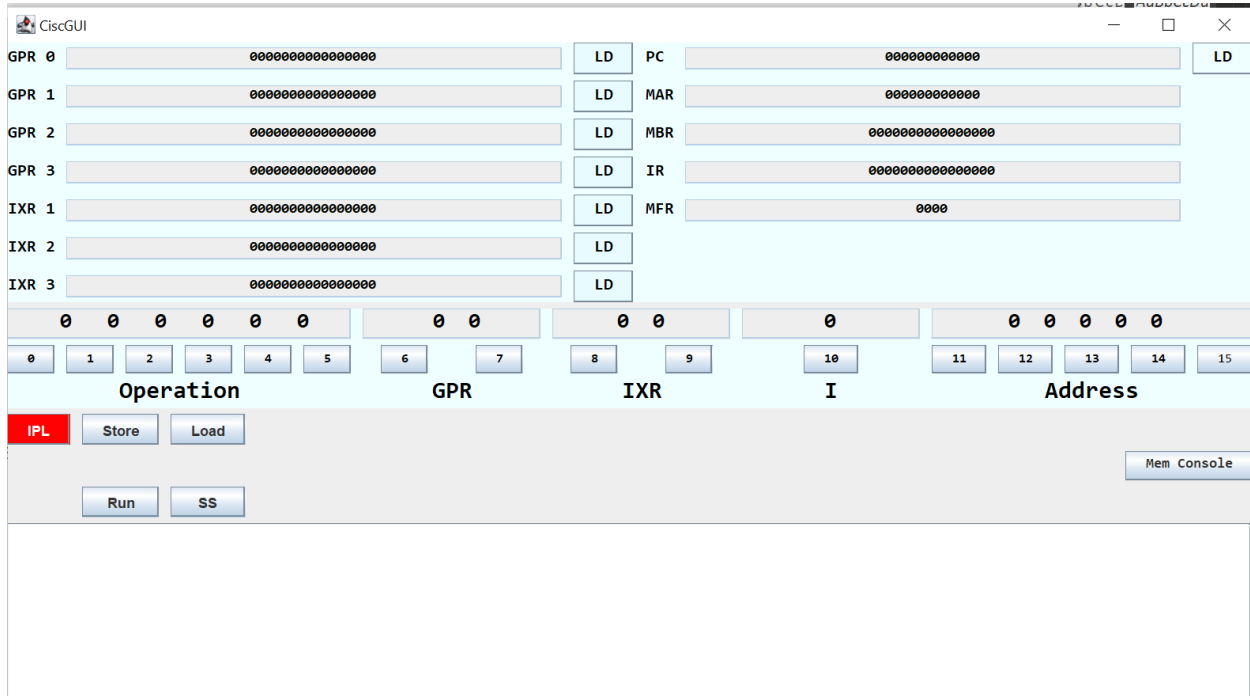


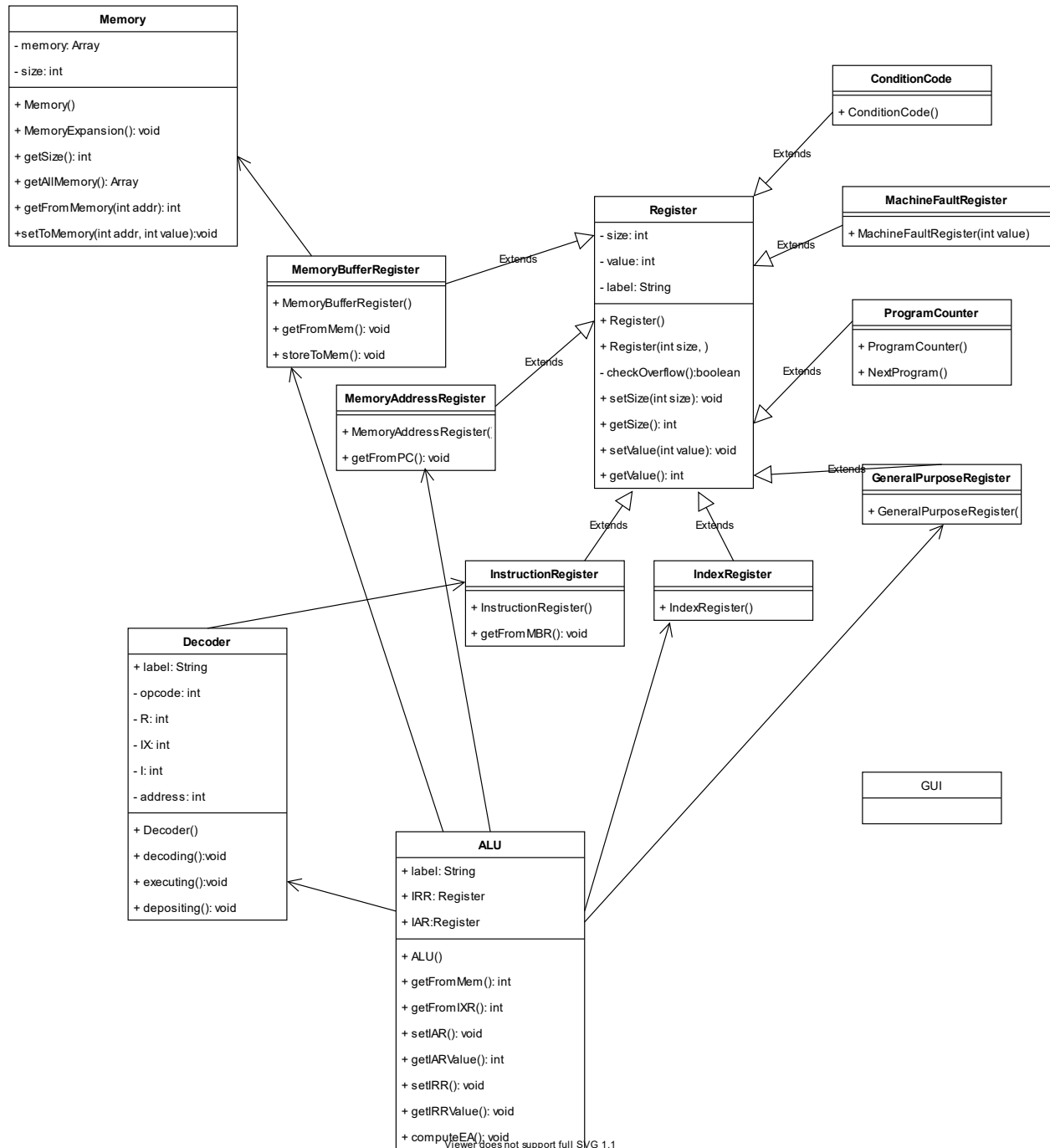
# Part 1 Design Guide

## GUI Design



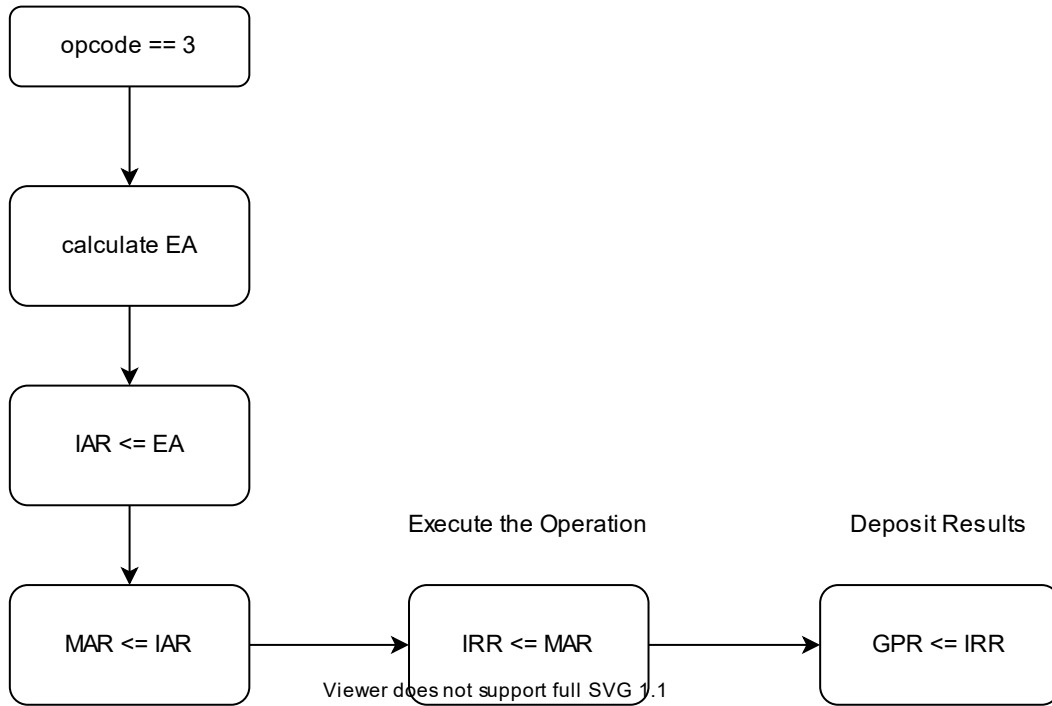
- Created with IntelliJ UI Designer using SWING library

## Class Diagram:



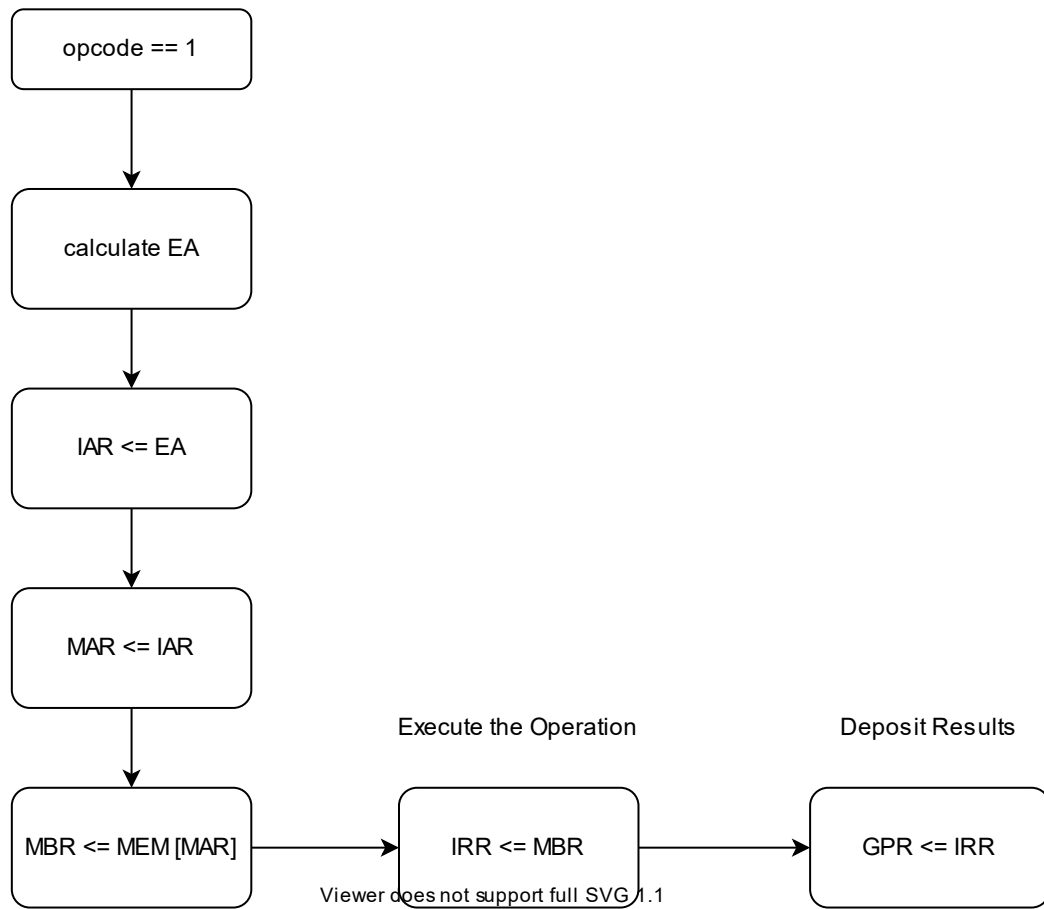
## LDA Flowchart:

Locate and Fetch Operand Data



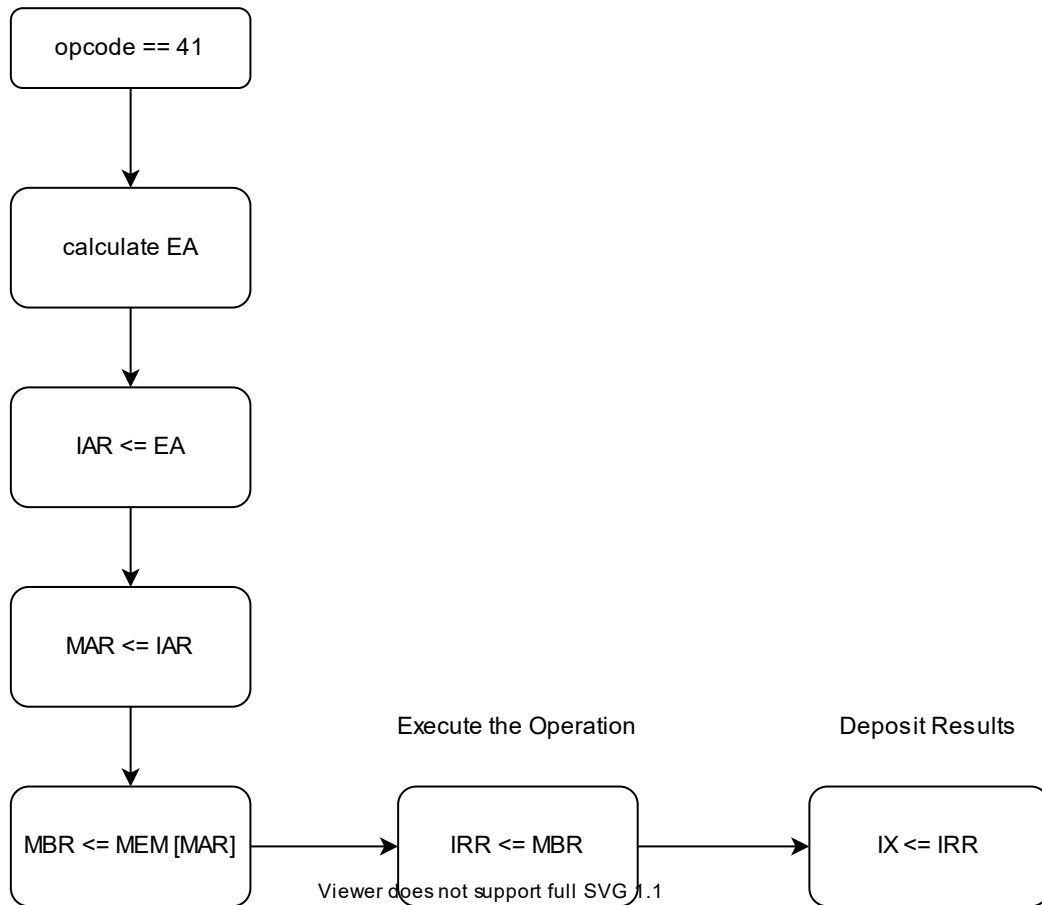
## LDR Flowchart:

Locate and Fetch Operand Data



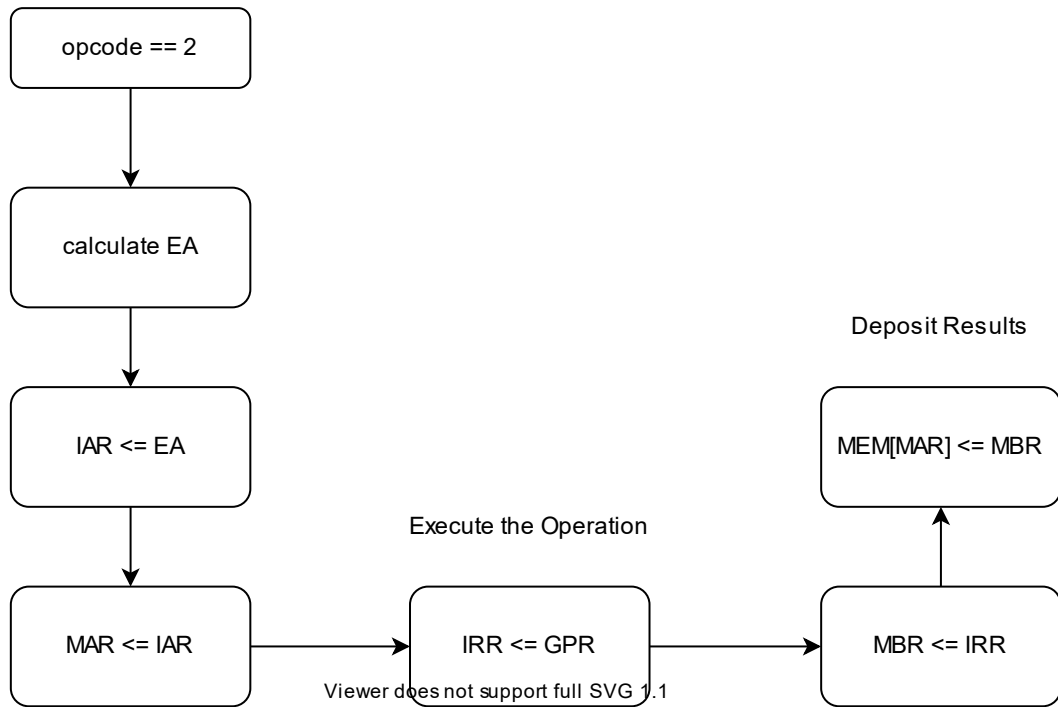
## LDX Flowchart:

Locate and Fetch Operand Data



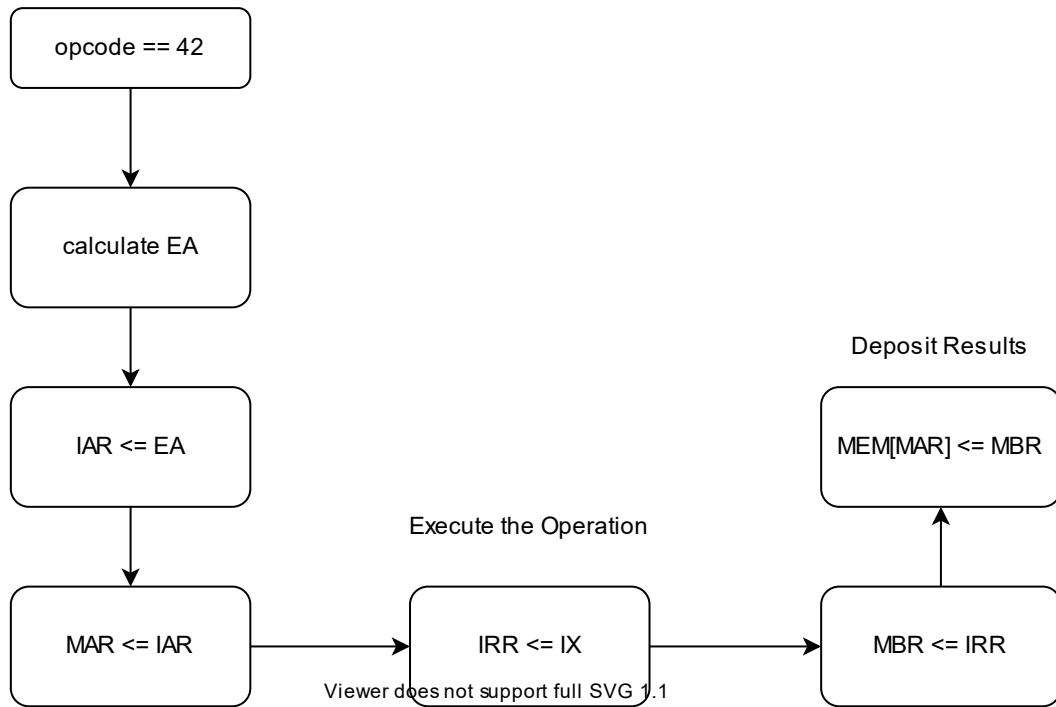
## STR Flowchart:

Locate and Fetch Operand Data

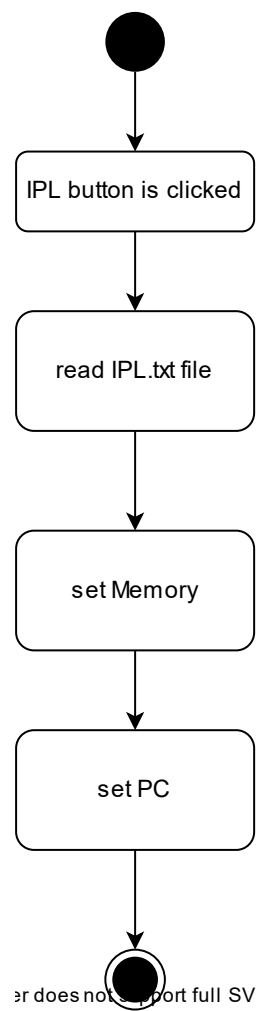


## STX Flowchart:

Locate and Fetch Operand Data

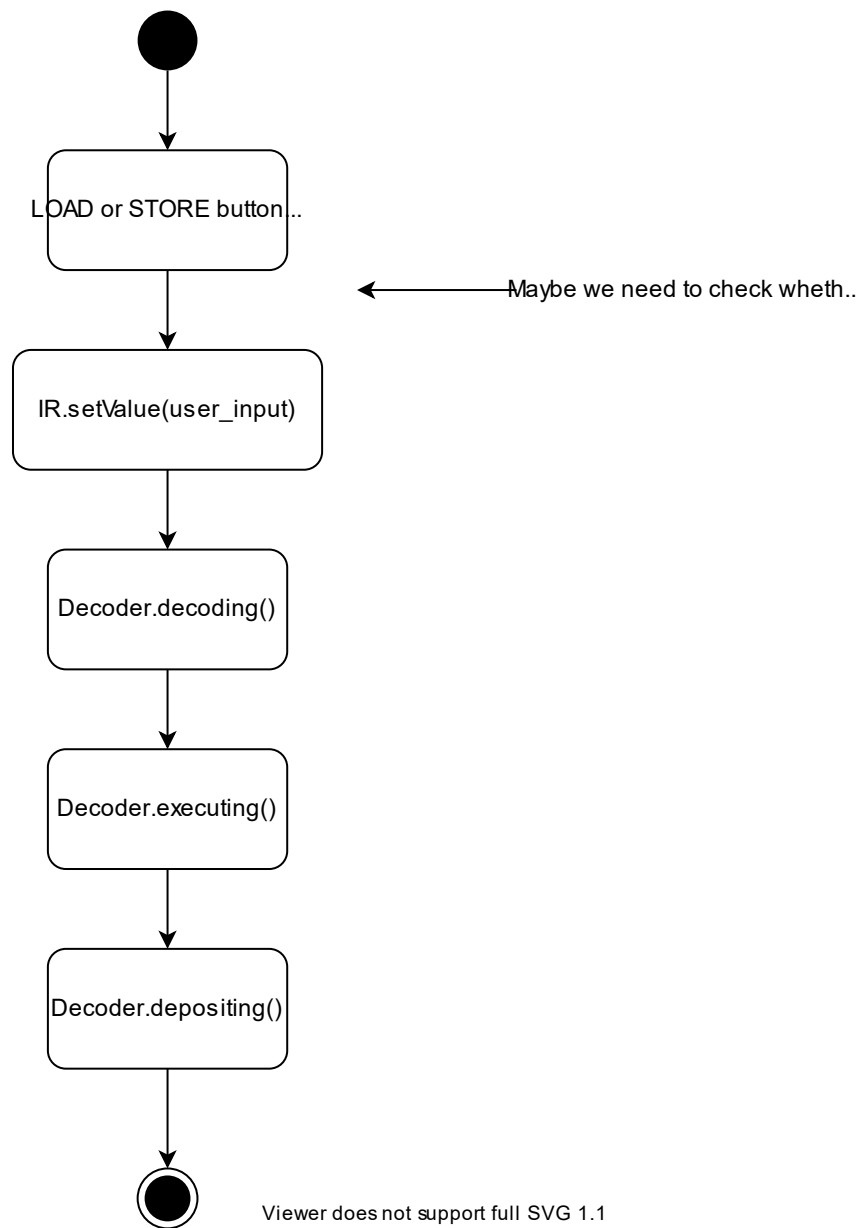


## IPL Button Flowchart:

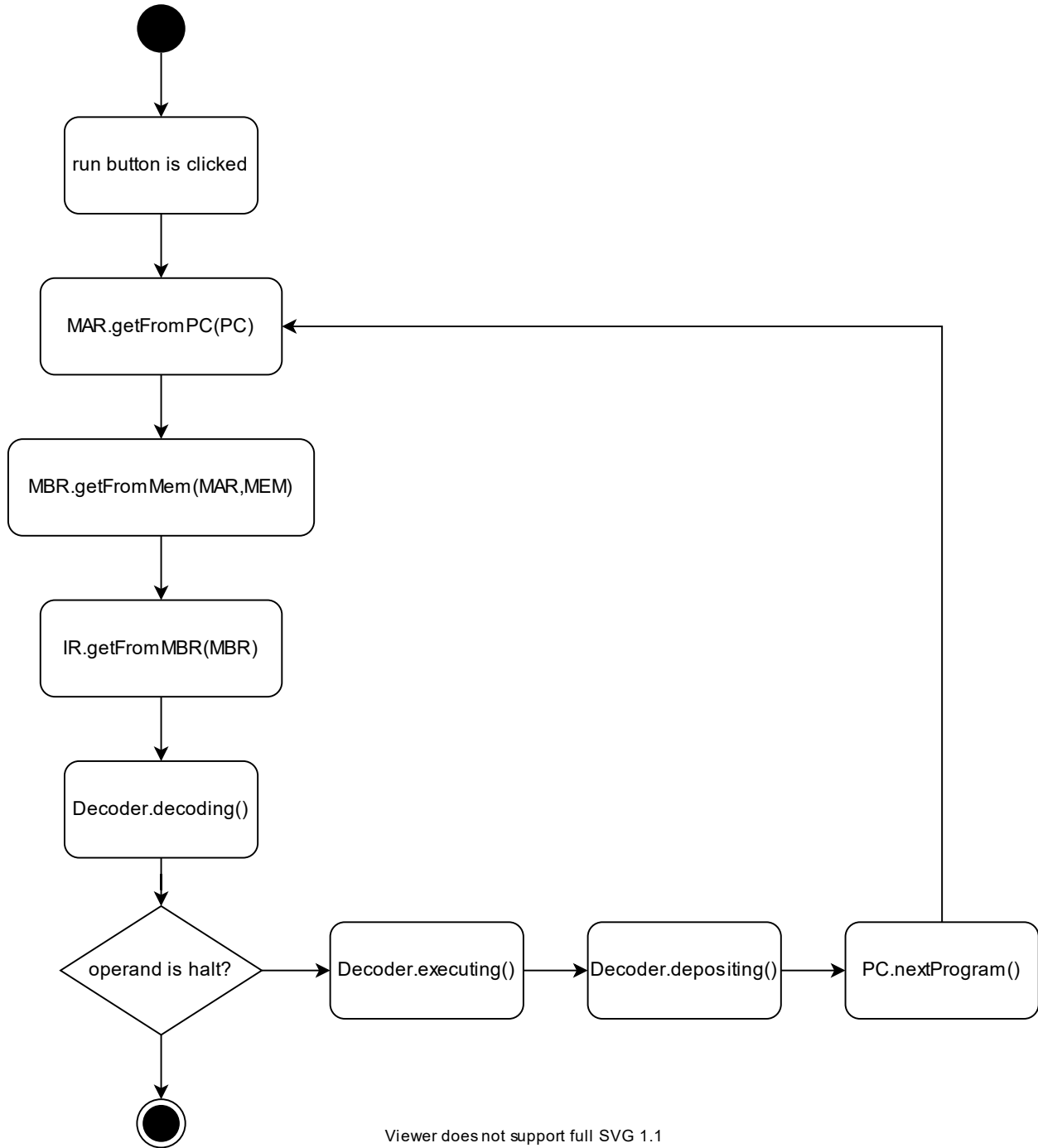




## Load & Store Button Flowchart



## Run Button Flowchart:



IPL Instructions and data used in IPL.txt:

**\*\*program:\*\***

LDR 0, 0, 20

STR 0, 0, 24

LDX 1, 24

LDX 2, 1, 20 (I want to use X1 to calculate the EA)

STX 2, 1, 24 (I want to use X1 to calculate the EA)

LDA 1, 1, 24

LDR 2, 2, 26, 1

STR 1, 2, 20, 1

**\*\*Data:\*\***

Mem[20] = 50

Mem[40] = 10086

Mem[50] = 40

Mem[70] = 24