Part 2 Design Guide

**GUI Design**

Graphical user interface, table

Description automatically generated

IN Instruction GUI User Prompt: Graphical user interface

Description automatically generated

**Jump If Zero (JZ) Instruction:**

**Graphical user interface, text

Description automatically generated**

**Jump if Not Equal (JNE) Instruction:**

**Graphical user interface

Description automatically generated with medium confidence**

**Jump if Condition (JCC) Instruction:**

**Graphical user interface, text, application, email

Description automatically generated**

**Unconditional Jump to Address (JMA) Instruction:**

**Diagram

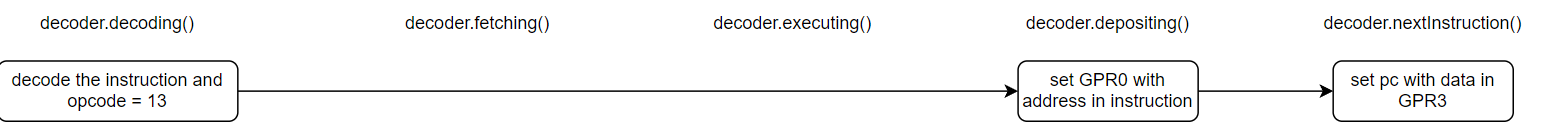
Description automatically generated with low confidence**

**Jump and Save Return Address JSR Instruction:**

**Graphical user interface, application

Description automatically generated**

**Return From Sub-Routine (RFS) Instruction:**

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**Subtract One and Branch (SOB) Instruction:**

**Graphical user interface, application

Description automatically generated**

**Jump Greater Than or Equal to (JGE) Instruction:**

**Graphical user interface

Description automatically generated**

**Add Immediate to Register (AIR) Instruction:**

**Diagram

Description automatically generated**

**Add Memory to Register (AMR) Instruction:**

**Diagram

Description automatically generated**

**Subtract Memory from Register (SMR) Instruction:**

**Diagram

Description automatically generated**

**Subtract Immediate from Register (SIR) Instruction:**

**Diagram

Description automatically generated**

**Multiply Register by Register (MLT) Instruction:**

**Diagram

Description automatically generated**

**Divide Register by Register (DVD) Instruction:**

**Diagram

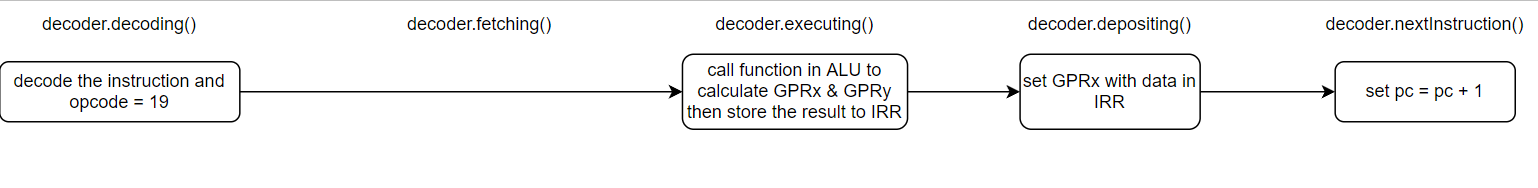
Description automatically generated**

**Test Equality of Register with Register (TRR) Instruction:**

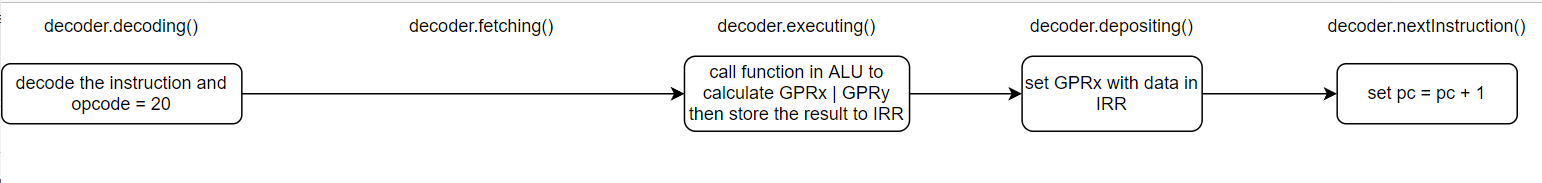
**Diagram

Description automatically generated**

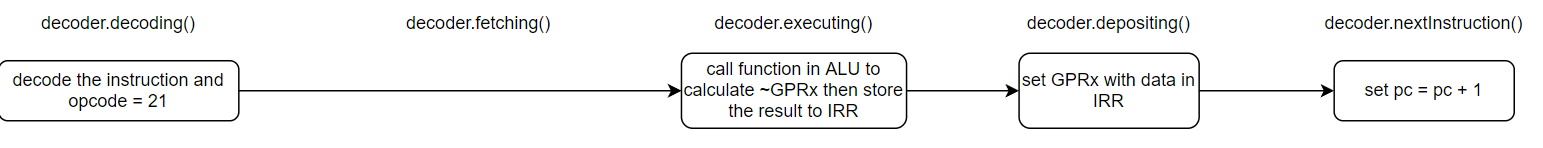
**Logical And of Register with Register (AND) Instruction:**

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**Logical Or of Register with Register (ORR) Instruction:**

****

**Logical Not of Register with Register (NOT) Instruction:**

****

**Shift Register by Count (SRC) Instruction:**

**Diagram

Description automatically generated**

**Rotate Register by Count (RRC) Instruction:**

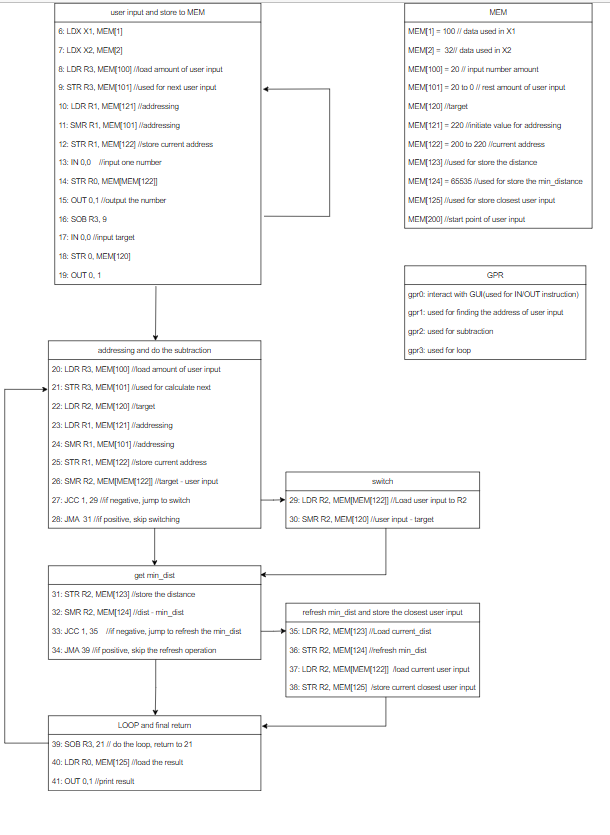
**Diagram

Description automatically generated**

**Cache design:**

**Program 1 Flowchart**

Refer to the file “program1.drawio.svg” for a clearer look.



**Class Diagram:**

Please refer to the file “Class-Diagram-Version2” that will be included in our Submission Folder.