

FUNCTIONS

ADD:

S24 → S1 → S2 → S3 → S4 → S5

ADC:

S24 → S1 → S2 → if (C=1) → S3 → S4 → S5

↓

if (C=0) → Next

ADZ:

S24 → S1 → S2 → if (Z=1) → S3 → S4 → S5

↓

if (Z=0) → Next

ADI:

S24 → S1 → S2 → S21 → S4 → S5

NDU:

S24 → S1 → S2 → S3 → S23 → S5

NDC:

S24 → S1 → S2 → if (C=1) → S3 → S23 → S5

↓

if (C=0) → Next

NDZ:

S24 → S1 → S2 → if (Z=1) → S3 → S23 → S5

↓

if (Z=0) → Next

LHI:

S24 → S1 → S2 → S19

LW:

S24 → S1 → S2 → S6 → S4 → S8 → S9

SW:

S24 → S1 → S2 → S6 → S10 → S11

LM:

Repeat till count reaches from 0 to 8

S24 →

↪ if (Imm bit = 0)

↪ ↑

S1 → S2 → S12 → S13 → S14

↓ ↑

if (Imm bit = 1)

SM:

Repeat till count reaches from 0 to 8

S24 →

↪ if (Imm bit = 0)

↪ ↑

S1 → S2 → S12 → S13 → S20

↓ ↑

if (Imm bit = 1)

BEQ:

S24 → S1 → S3 → S7 → if (Z=0) → S2

↓

if (Z=1)

↓

S15 → S16 → S2

JAL:

S24 → S1 → S17 → S22 → S16 → S2

JAR:

S24 → S1 → S22 → S18 → S2