**Program 2 – Conditional Jump Program files**

C Program:

int a = 2;

int b = 3;

if(a > b){

int c = a + b; // 5

}

else{

int c = a – b; // -1

}

Assembly code:

irmov 2 0

rmmov 0 0

irmov 3 1

rmmov 1 1

sub 0 1

jl 3c

mrmov 1 2

add 0 2

rmmov 2 2

jump 4e

mrmov 1 2

sub 0 2

rmmov 0 2

halt

Hex code:

00 f0 02 00 00 00 30 00 00 00 00 00 00 f1 03 00 00 00 30 10 01 00 00 00 42 01 00 00 00 00 62 ff 3c 00 00 00 20 20 01 00 00 00 40 02 00 00 00 00 30 20 02 00 00 00 50 ff 4e 00 00 00 20 20 01 00 00 00 42 02 00 00 00 00 30 20 02 00 00 00 70 00 00 00 00 00