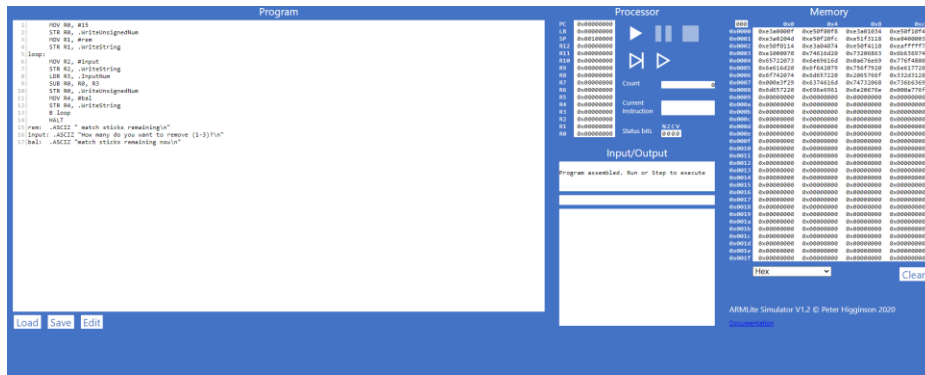


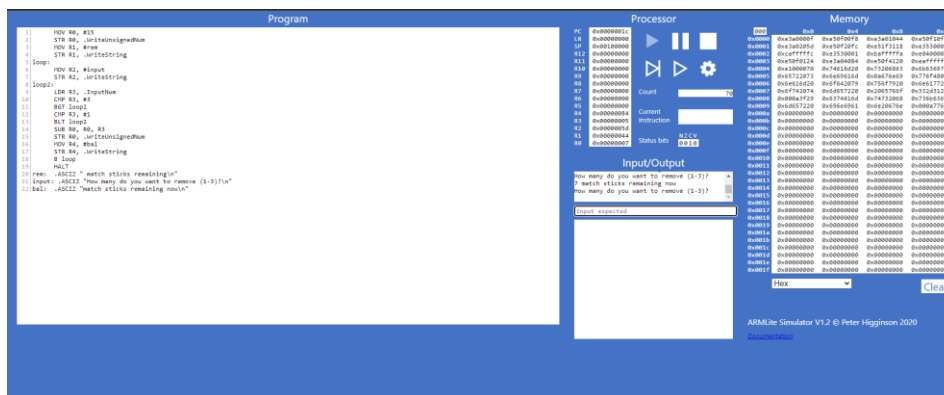
8.1.1





8.2.2

- The Condition should be set as if input is greater than 0 and less than 4 it should store the user input value.
- we can use Conditional Branching such as BGT and BLT to compare with the APSR.
- when the user input value is bigger than 3.
-



8.3.1

- LSR R5, R5, #30

b)

```
Program
1 |select|
2 |ldr R1, .Random
3 |str R1, R2, #30
4 |cmp R1, #0
5 |beq select
6 |halt
```

8.3.2

```
Program
1 |mov R0, #1
2 |select|
3 |ldr R2, .Random
4 |lsr R2, R2, #30
5 |cmp R2, #0
6 |beq select
7 |cmp R2, R0
8 |bgt select
9 |halt
```

8.4.1

```
Program
1 |mov R0, #15
2 |str R0, .WriteUnsignedNum
3 |mov R1, #0
4 |str R1, .WriteString
5 |mov R5, #1
6 |loop:
7 |mov R2, #input
8 |str R2, .WriteString
9 |loop2:
10 |ldr R3, .InputNum
11 |cmp R3, #3
12 |bgt loop2
13 |cmp R3, #1
14 |blt loop2
15 |sub R0, R0, R3
16 |str R0, .WriteUnsignedNum
17 |mov R4, #0
18 |str R4, .WriteString
19 |select:
20 |ldr R6, .Random
21 |lsr R6, R6, #30
22 |cmp R6, #0
23 |beq select
24 |cmp R6, R5
25 |bgt select
26 |sub R0, R0, R6
27 |mov R7, #comp
28 |str R7, .WriteString
29 |str R0, .WriteUnsignedNum
30 |mov R4, #0
31 |b loop
32 |halt
33 |rem: .ASCII2 " match sticks remaining\n"
34 |input: .ASCII2 "How many do you want to remove (1-3)?\n"
35 |bgt: .ASCII2 "match sticks remaining non\n"
36 |comp: .ASCII2 "computer has played a turn\n"
```

Processor

PC: 0
LR: 0
SP: 1048576
R12: 0
R13: 0
R10: 0
R9: 0
R7: 0
R6: 0
R5: 0
R4: 0
R3: 0
R2: 0
R1: 0
R0: 0

Count: 0
Current: 0
Instruction: 0
Status bits: 0000

Input/Output

Stop done, edit & Submit, RUN/STEP or alter memory

Memory

Addr	End	Hex	Dec
0x0000	381891807	3842965752	3818918004
0x0001	3818934273	38189222125	3842973992
0x0002	3813867521	2405774444	3813867521
0x0003	3762290691	3842965800	3818930356
0x0004	3844030952	3785307014	3814064128
0x0005	3780507901	3405774041	3782220604
0x0006	3842994504	3842965840	3818930356
0x0007	3774873712	1952541084	1951303715
0x0008	1701978227	1852399981	174500633
0x0009	1851876688	1868032889	1970239776
0x000a	1860881460	1835164896	543520167
0x000b	671520	1668571501	1953701992
0x000c	1835364896	1768843017	1847617390
0x000d	1802200131	1930251573	1939703488
0x000e	543450489	1970544737	683634
0x000f	0	0	0
0x0010	0	0	0
0x0011	0	0	0
0x0012	0	0	0
0x0013	0	0	0
0x0014	0	0	0
0x0015	0	0	0
0x0016	0	0	0
0x0017	0	0	0
0x0018	0	0	0
0x0019	0	0	0
0x001a	0	0	0
0x001b	0	0	0
0x001c	0	0	0
0x001d	0	0	0
0x001e	0	0	0
0x001f	0	0	0

Decimal (unsigned) Clear

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[Documentation](#)

Implemented the subtraction of matches from the computers player's values.