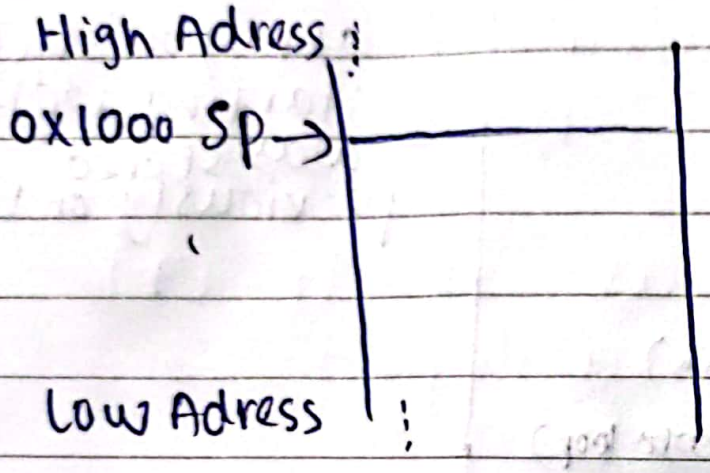
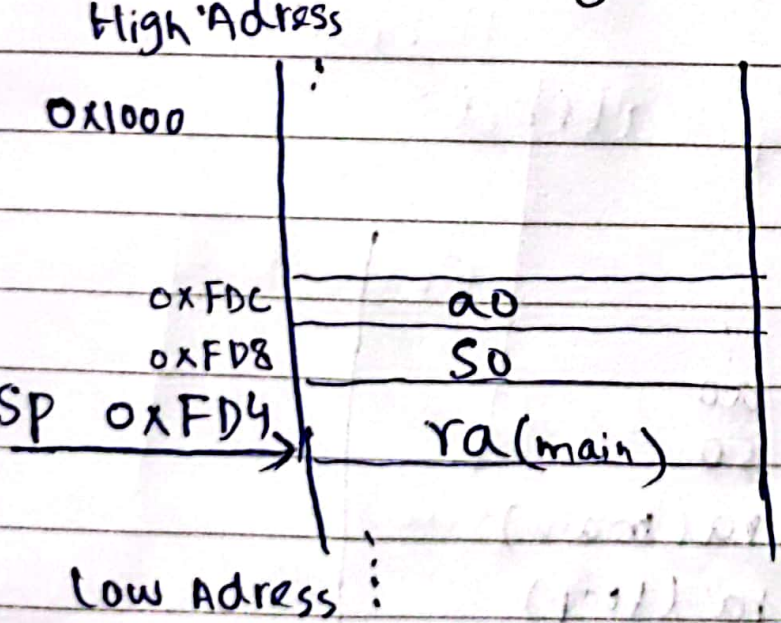
Programming Task #2

Assumptions: Starting Adress of stack 0x1000

① Before calling any function



② When DataArray is called



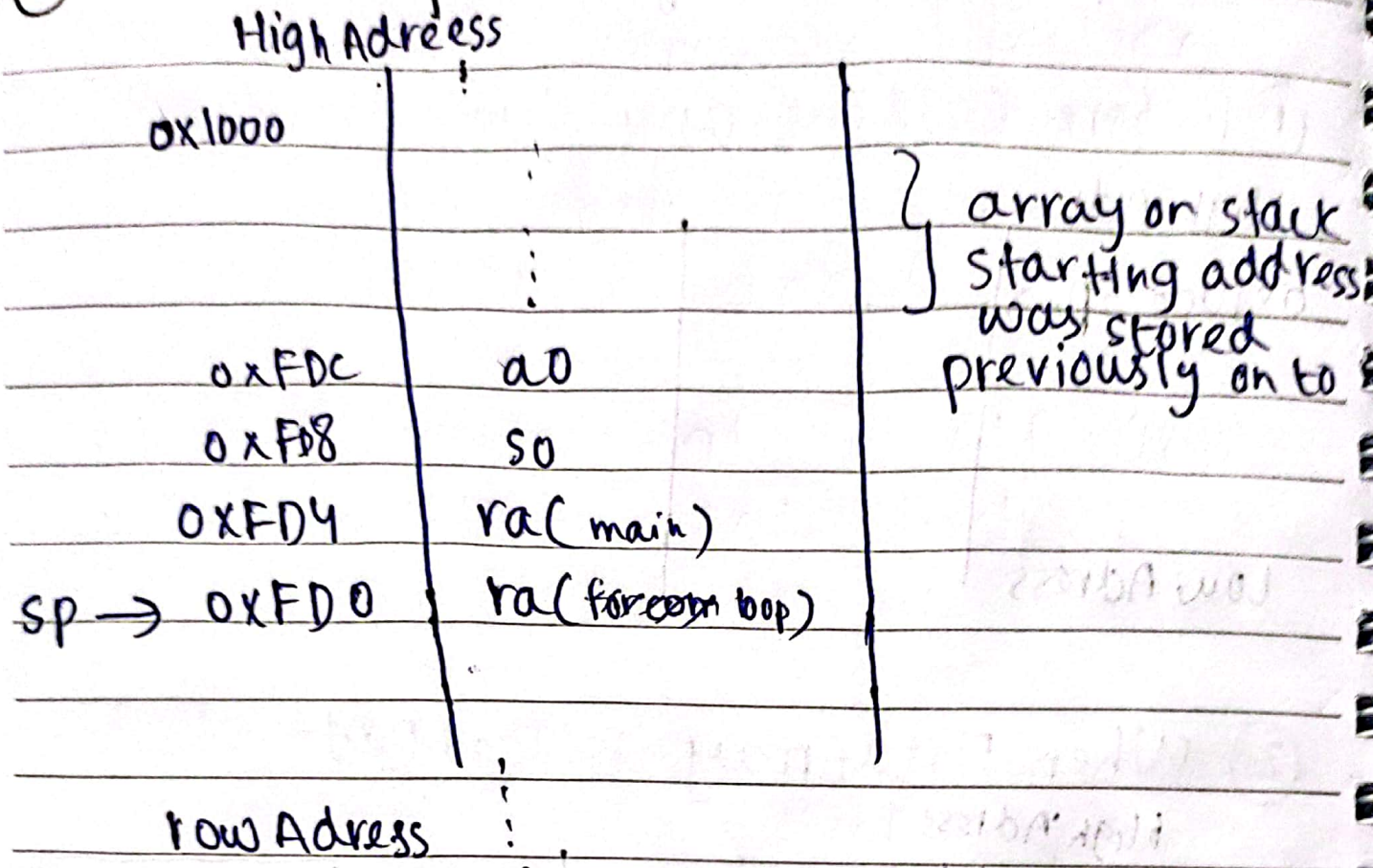
0xFD4 as (0x1000 - 44 is 0xFD4

Before going in loop

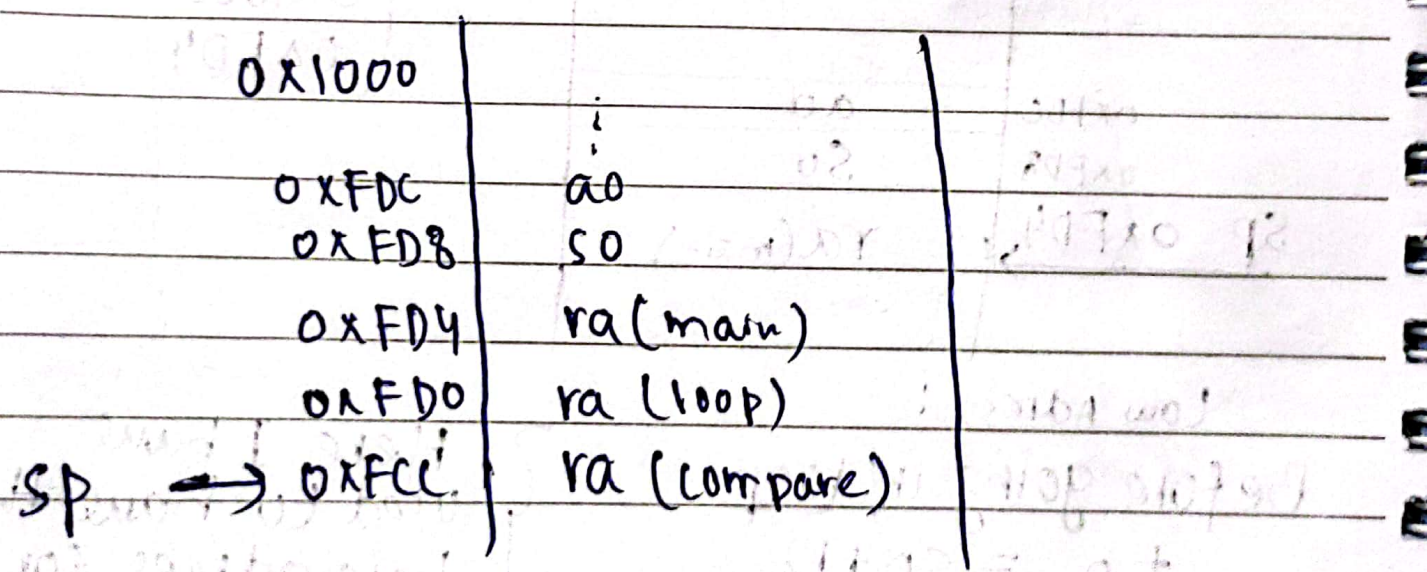
to = sp + 12
= 0xFD4 + 0xC
= 0xFE0

Here I have used to have the base adrees for array on stack which will have 10 elements ends at 0x1000

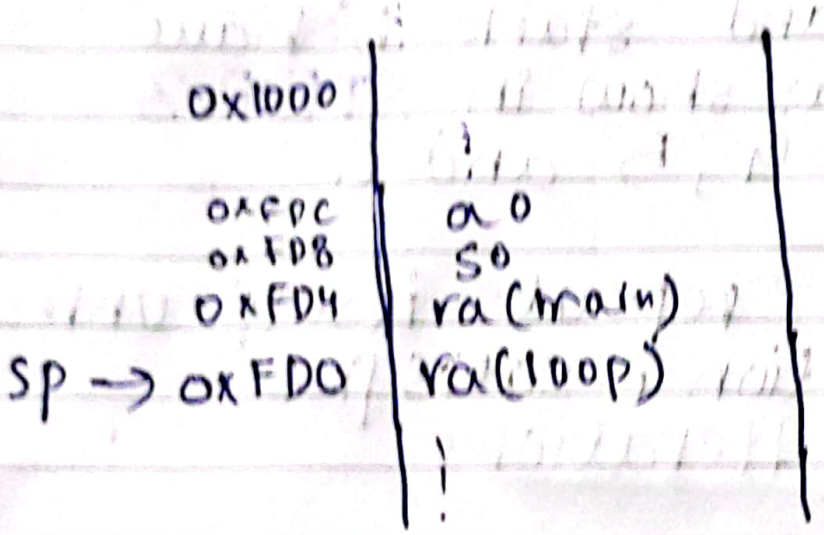
③ when compare is called



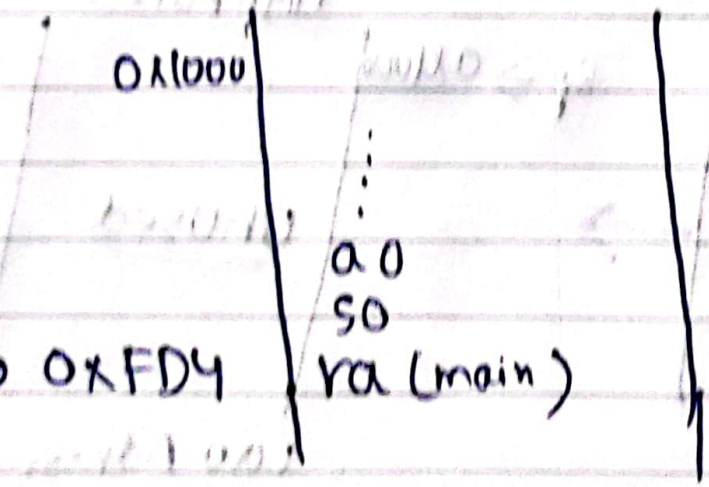
④ when sub is called



⑤ After Sub comming out of sub function pop the ra(compare) out of stack



⑥ After Comming out of compare funct.



After compare func the result is stored at 0(t0) adress.
so is incremented by 1
a0 is loaded with num and then again loop condition is checked.

If the loop condition is not satisfied then compare function is called and stack behave exactly as show in **STEP 3** then Step 4, 5 and 6

This process repeats itself unless loop condition is satisfied

→ **After 10th Iteration:-**

Stack changes as