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Computer Science 240-20

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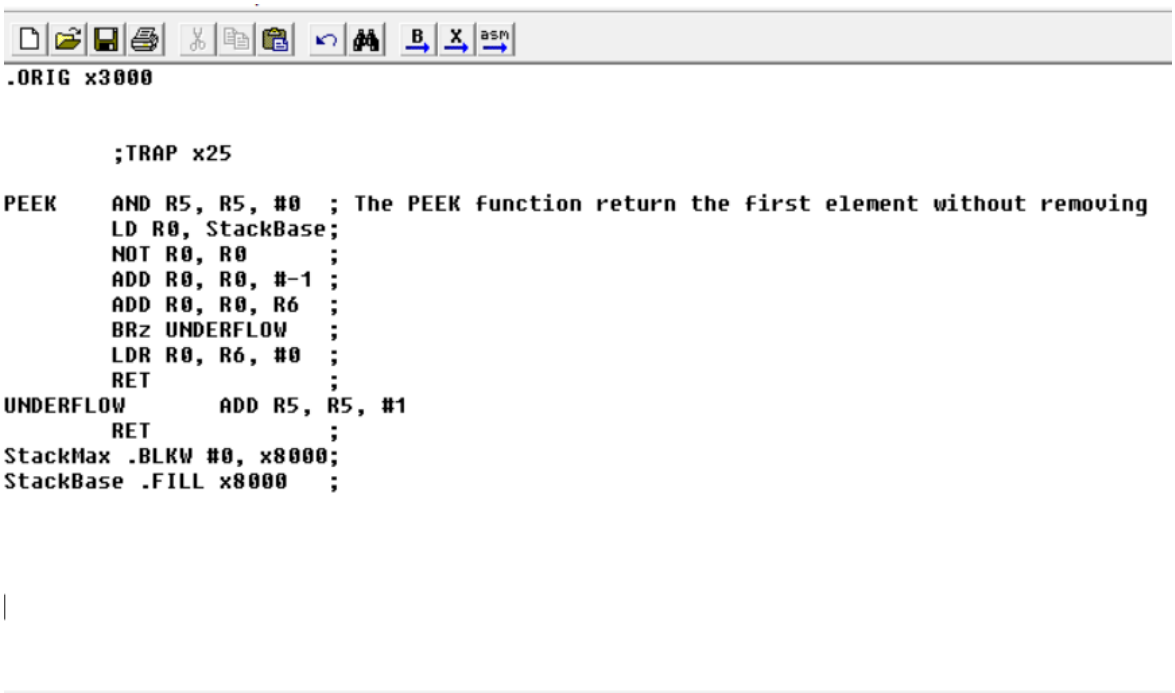
Problem Set: Data Structures

1. Screenshot



```
.ORIG x3000

        ;TRAP x25

PEEK    AND R5, R5, #0  ; The PEEK function return the first element without removing
        LD R0, StackBase;
        NOT R0, R0      ;
        ADD R0, R0, #-1 ;
        ADD R0, R0, R6  ;
        BRz UNDERFLOW   ;
        LDR R0, R6, #0  ;
        RET             ;
UNDERFLOW       ADD R5, R5, #1
        RET             ;
StackMax .BLKW #0, x8000;
StackBase .FILL x8000   ;
```

2.

   a. The container only has A and F after PUSH F.

   b. The container has the most elements after we PUSH J

   c. A,F, and M