Problem 24. (10 points):

A C function `looper` and the assembly code it compiles to on an IA-32 machine running Linux/GAS is shown below:

```
looper:
  pushl %ebp
  movl %esp,%ebp
  pushl %esi
  pushl %ebx
  movl 8(%ebp),%ebx
  movl 12(%ebp),%esi
  xorl %edx,%edx
  xorl %ecx,%ecx
  cmpl %ebx,%edx
  jge .L25
.L27:
  movl (%esi,%ecx,4),%eax
  cmpl %edx,%eax
  jle .L28
  movl %eax,%edx
.L28:
  incl %edx
  incl %ecx
  cmpl %ebx,%ecx
  jl .L27
.L25:
  movl %edx,%eax
  popl %ebx
  popl %esi
  movl %ebp,%esp
  popl %ebp
  ret
```

```
int looper(int n, int *a) {
    int i;
    int x = _____;

    for(i = _____;

        _____;

          i++) {

        if (_____)

            x = _____;

            _____;
    }

    return x;
}
```

Based on the assembly code, fill in the blanks in the C source code.

Notes:

- You may only use the C variable names `n`, `a`, `i` and `x`, not register names.

- Use array notation in showing accesses or updates to elements of `a`.