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1. Draw a parse tree for the body of the function below. You don't need to include the function header, it's just there for your context—assume that the “for” statement is at the top of the parse tree. You can make up plausible AST nodes for C code.

```
void copy_bytes(char dest[], char source[], int n) {  
    for (int i = 0; i < n; ++i)  
        dest[i] = source[i];  
}
```

2. Translate a WHILE statement of the form `while P do S` into WHILE3ADDR?

3. Write pseudocode for a simple syntactic analysis that warns when string concatenation occurs in a loop. Note:

- In Java and .NET it is more efficient to use a StringBuffer
- Assume any appropriate AST elements that you need