

# Language Study: Erlang

CMSC 233

## —Challenge 1

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Goals	To get better at recursive list processing, impress Alan, and earn 35 extra points to make up for that horrible midterm practical.
Challenge	Write a <b>subst</b> function that takes three (3) arguments and substitutes the second for the first in the third. Think of it as “substitute A with B in C”. More concretely, “Substitute Alex with Neil in [a list]”. E.g., <pre>subst(alex, neil, [neil, alex, geddy])</pre> returns <pre>[neil, neil, geddy]</pre>
Submitting	E-mail me your source code and example runs.

### Details

Only consider the “flat” list use case at first, like the example above. Here is a similar use case:

```
>subst:subst(kirk, picard, [kirk, spock, mccoy, scotty, kirk, sulu, chekov, uhura]).  
Substituting picard for kirk in [kirk,spock,mccoy,scotty,kirk,sulu,chekov,uhura].  
Results:[picard,spock,mccoy,scotty,picard,sulu,chekov,uhura]
```

When you’ve got that working, (make a backup and) enhance your code to handle lists within lists.

Here are two test cases like that:

```
>subst:subst(kirk, picard, [kirk, spock, mccoy, [scotty, kirk, sulu], chekov, uhura]).  
Substituting picard for kirk in [kirk,spock,mccoy,[scotty,kirk,sulu],chekov,uhura].  
Results:[picard,spock,mccoy,[scotty,picard,sulu],chekov,uhura]
```

```
>subst:subst(kirk, picard, [kirk, spock, mccoy, [scotty, kirk, [sulu], [[kirk, rand]]],  
chekov, uhura]).  
Substituting picard for kirk in [kirk,spock,mccoy,[scotty,kirk,[sulu],  
[[kirk,rand]]],chekov,uhura].  
Results:[picard,spock,mccoy,  
[scotty,picard,[sulu],[[picard,rand]]],  
chekov,uhura]
```

See if you can get the printed output to look just like mine too.

Good luck!