

TDT4205

Problem Set 5

Optimizations

1.1

The optimization applied is *Dead code elimination* : $g=f$ disappears because the value is never used after assignation.

1.2

The optimization applied is *Common subexpression elimination* : the expression $b+c$ is used multiples times, so we can reuse the result keeping it in a temporal variable called $t1$.

1.3

The optimization applied is *Constant propagation* , because the values of a , b and c do not change.

1.4

The optimization applied is *Copy propagation* : after assign $f=e$, replaces the uses of f with e .