MIT 6.035: Computer Language Engineering

Spring 2022

Mini Quiz 18

github.com/6035/sp22

Name:

Kerberos username (omit @mit.edu):

For the basic block:

$$s = q + r$$

$$t = 2*r+s$$

t = q

$$u = q + r$$

$$v = q + t$$

State which optimization was performed on the above block to produce the following blocks. The optimization choices are: Copy Propagation, Common Subexpression Elimination, and Dead Code Elimination.

1. s = q + r

$$t1 = s$$

$$t = 2*r+s$$

$$t = q$$

$$u = t1$$

$$v = q + t$$

2. s = q + r

$$t = 2*r+s$$

$$t = q$$

$$u = q + r$$

$$v = q + q$$

3. s = q + r

$$t = q$$

$$u = q + r$$

$$v = q + t$$