

Werkcollege Compilerconstructie
Vrijdag 15 november 2019

1. (cf. Exercises 8.6.1 and 8.6.4 from the book)

Consider the following C code:

```
x = a[i] + 1;  
k = x;  
b[i][j] = k + y;
```

Assume that all array elements are integers taking four bytes each, and that b is a 100×100 array

- (a) Generate three-address code for this C code.
- (b) Convert your three-address code into machine code, using the simple code-generation algorithm of Section 8.6, assuming three registers R1, R2 and R3 are available. Show the register and address descriptors
- before the first instruction
 - and after each piece of assembly code that corresponds to a three-address instruction.