

CS241 Tutorial 10

Graham Cooper

July 17th, 2015

Topics:

- Codegen
- Expressions
- Switch Statement
- Test Code

Convention and Tips

- store results in \$3
- Store intermediate values on the stack
- define implementation-level helper functions (e.g push/pop)
- store 4 in \$4 ,1 in \$11, etc
- output comments for debugging

Expressions

```
code(factor -> ++lvalue) =  
code(lvalue) ; address in $3  
add $5, $3, $0  
lw $3, 0($3)  
add $3, $3, $11  
sw $3, 0($5)
```

```
code(Factor -> lvalue++) =  
code(lvalue) ; address in $3  
add $5, $3, $0  
lw $3, 0($3)  
add $6, $3, $11  
sw $6, 0($5)
```

Switch Statement

```
switch(expr){  
  -- case(expr){  
    -- -- statements  
  --}  
  -- case(expr){  
    -- -- statements  
  --}  
  ...  
  -- default {  
    -- -- statements  
  -- }  
}  
  
code (cases -> cases case) =
```