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Lab 5: Frames & Translation to Trees

Description

Augment semant.c to allocate locations for local variables, and to keep track of the nesting level.

Try to keep all the machine-specific details in your machine-dependent Frame module (x86frame.c), not in Semant or Translate.

Design translate.h, implement translate.c, and rewrite the Semant structure to call upon Translate appropriately. The result of calling SEM_transProg should be a F_fragList.

Files related in Lab 5 include:

- **tiger.*** Use your own tiger.*
- **semant.c**
- **frame.h**
- **x86frame.c**
- **translate.***

Notice: Before you start this lab, you should carefully read the chapter 6 and 7 of the textbook. And if you have any question about this lab, feel free to contact Dingji Li, who is the teaching assistant responsible for lab 5.

Environment

You can download the lab environment [here](#), and then decompress it to your current directory by the following command.

```
shell% tar -xzf lab5.tar.gz
```

Grade Test

The lab environment contains a grading script named as **gradeMe.sh**, you can use it to evaluate your code, and that's how we grade your code, too. If you pass all the tests, the script will print a successful hint, otherwise, it will output some error messages. You can execute the script with the following commands.

```
shell% ./gradeMe.sh
shell% ...
shell% [^_]: Pass Lab5 #If you pass all the tests, you will see these messages.
```

Handin

The deadline of this lab is on **Tuesday 12:00 AT NOON, Nov. 27, 2018**, and no delay is allowed!

After you have passed the grade test, you need first package your code and rename the file lab5_XXX.tar.gz to lab5_[your student ID].tar.gz. For example, if your student ID is 516037900000, then the file name should be lab5_516037900000.tar.gz, and no any other letters are included. You can use the following commands to finish this step.

```
shell% make handin #This command will do the packaging for you, generating a file named as lab5_XXX.tar.gz
shell% mv lab5_XXX.tar.gz lab5_516037900000.tar.gz
```

In the end, you need to submit the renamed tar.gz file to ftp://dj_lee:public@public.sjtu.edu.cn/upload/lab5 before the deadline.

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Questions or comments regarding *Compilers* course? Send e-mail to the course Staffs or TAs.

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