

[Home / News](#)[Schedule](#)[General Information](#)[Labs](#)

Lab 4: Type Checking

Description

Write a type-checking phase for your compiler, a module **semant.c** matching the following header file:

```
/* semant.h */
```

```
void SEM_transProg(A_exp exp);
```

that type-checks an abstract syntax tree and produces any appropriate error messages about mismatching types or undeclared identifiers.

Also provide the implementation of the **Env** module described in this chapter. You must use precisely the Absyn interface described in Figure 4.7, but you are free to follow or ignore any advice given in this chapter about the internal organization of the Semant module.

Notice: Before you start this lab, you should carefully read the chapter 5 of the textbook. And if you have any question about this lab, feel free to contact Haoyu Li, who is the teaching assistant responsible for lab 4.

Environment

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

```
shell% tar -zxvf lab4.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 #If you pass all the tests, you will see these messages.
shell% TOTAL SCORE: 100
```

Handin

The deadline of this lab is on **Thursday 12:00 AT NOON, Nov 6, 2018**, and no delay is allowed!

After you have passed the grade test, you need first package your code and rename the file lab4_XXX.tar.gz to lab4_[your student ID].tar.gz. For example, if your student ID is 516037900000, then the file name should be lab4_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 lab4_XXX.tar.gz
shell% mv lab4_XXX.tar.gz lab4_516037900000.tar.gz
```

In the end, you need to submit the renamed tar.gz file to
<ftp://haoyu.li:public@public.sjtu.edu.cn/upload/lab4> before the deadline.

Go to [Top](#) // [Compilers Home Page](#)

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

Last updated: Mon Sep. 17 2018