

GIT Department of Computer Engineering
CSE 222/505
Spring 2013
Homework 05

A Programming Language with Loops
Due date: April 17th 2013 23:59

In this homework, you will extend the previous GIT language with loops. The main loop structure of the new language is like following

```
loop n:1:10  
begin  
statements  
end
```

Using the loop structure in a program like below

```
int fact  
int k  
fact = 1  
k = 5  
loop n:1:k  
begin  
    fact = fact * n  
    print n  
    print fact  
end
```

will print

```
1  
1  
2  
2  
3  
6  
4  
24  
5  
96
```

note that your loops can be

- nested
- can have local variables.

To handle local variables and nested loops, you will need to keep your variables in linked lists as before but

now you will use a stack to keep a number of linked lists.

In your submission, show your work for software engineering phases. You should use EA as much as possible.

Provide at least 5 test programs and their outputs. Finally, do not forget to follow the homework submission rules.