

# 15213 Lecture 7: Procedures

## 1 Getting Started

To obtain a copy of today's activity, log into a shark machine and do the following:

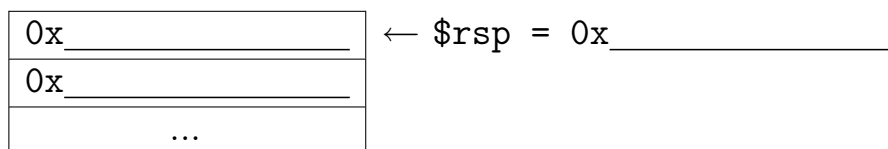
1. \$ `wget http://www.cs.cmu.edu/~213/activities/lec7.tar`
2. \$ `tar xf lec7.tar`
3. \$ `cd lec7`

First run `act6` in GDB and follow the instructions on your screen. After you finish with `act6`, run `act7`. You may refer to the sheet from the first GDB activity as a reference.

## 2 Discussion Questions: act6

Use GDB's `command` to progress through the activities. These questions accompany the program; as it poses each one, discuss with your partner and write your answer here.

Contents of the stack:



1. What was the meaning of the second number on the stack?
2. What are the semantics of the `ret` instruction?
3. Given your knowledge of the `ret` instruction, what must be the semantics of `call`?

4. Given your knowledge of the `printf()` function, what should the first argument be?

5. Where did arguments 7 and 8 go?

### 3 Discussion Questions: act7

6. What does `getV(int)` do?

7. What is this function doing?

### 4 Optional Endianness Preview

Rerun `act6` with the `m` argument and continue to the point where you printed the stack before.

1. What do you expect the first two *bytes* of the stack to contain?

2. Check your hypothesis by running `x/2xb`. In what order are each integer's bytes stored?