15213 Lecture 6: Assembly Control Flow

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/lec6.tar`

2. `$ tar xf lec6.tar`

3. `$ cd lec6`

Now run `$ gdb ./act4` and follow the instructions on your screen. It will occasionally ask you discussion questions, whose answers you can record in the following section. Feel free to refer to the activity sheet from last class if you need a reference of GDB commands.
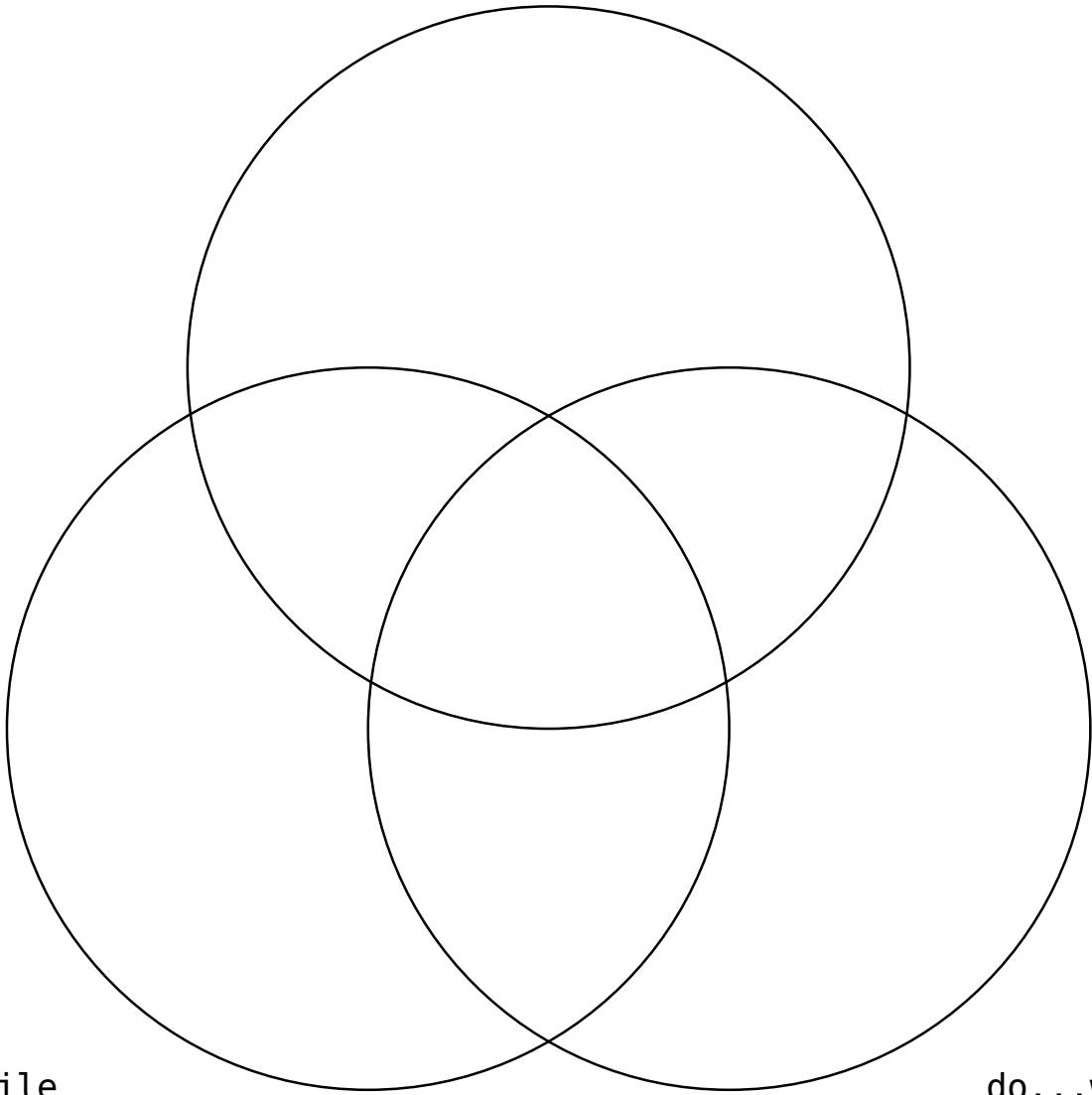
2 Discussion Questions

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

1. Which register corresponds to each of the function's parameters?

2. If the tested condition has not changed following a backward jump, what will happen to the program?

3. Read the assembly for this function and determine what it does.

4. What does and does not change between the three loops?
   (You may use the Venn Diagram on the back.)

3 Advanced Follow-Up Question

If you finish early, look back at the assembly for `carryAdd()`. Do you think it would be easier to implement this function in C? Why or why not?

for

while

do...while