Debugging

Outline

• Announcements:
  – HW II due Friday!
• db

db

• To use db, compile with -g flag
  – On most systems, can’t use -g with -O (optimizations)
• Then type
  – (g)db program inputs
• db will start and it will “grab” your program
**Typical session,**
- Set breakpoint(s) (br)
- Run until you hit a breakpoint (run)
- Step through some lines (n, s)
- Look at some variables (p)
- Continue to next breakpoint (c)
- Quit (q)

**Setting breakpoints**
- break ReadComm -- sets a breakpoint at ReadComm
- break io.c:21 -- sets a breakpoint at line 21 in io.c

**Stepping through**
- Typing run will take you to the next breakpoint
- You can step through line by line by typing n(ext)
  - gdb will display the next line of code to be executed
- If the next line is a call to another subroutine
  - Typing s(tep) will "step into" that routine
  - Typing n(ext) will skip to the next routine
db

- Viewing variables
  - You can check the value of a variable by typing "p name"
  - This may not be what you expect
    - p array will give the memory address of the array
    - p array[0] will give the value at the first location
- db is complicated
  - Type man db or man gdb to see more info