

1. A software breakpoint is a temporary break only in your code. It places a special instruction where the breakpoint location is located and stops the code from executing. A hardware breakpoint, on the other hand, is set using a watchpoint that watches changes in a specific address space (e.g. registers, MMU, etc).
2. A breakpoint is an instruction that tells your program to stop at a particular location. It's a signal that interrupts the processor from running the next line of code. A watchpoint is a special type of breakpoint. It interrupts the program when there is a value or structure change.
3. Yes. You can use the ``set`` command to change the value of a variable.
4. I can use ``ptype my_string``. It would print out the type of the variable which include the size of the array. I can also use ``sizeof`` to find the size of the variable.
5. We can place a breakpoint and then use ``c 9999`` to get to the 9999th iteration. Then, that will allow us to continue on to investigate the 10000th iteration.
6. First, I would figure out which line the scheduler function is on. I can either look into the file or use the ``list`` command and scroll. Then, call ``break filename:line# if strcmp(task, "x") == 0``. After that, we can set a convenience variable (this will remain throughout the program's execution) by using ``set $tmp_priority = priority`` to store the priority value.