

Lab 3 questions and answers - Jordan Dube

- 1) Question 1. What is the current value of I? What might be the cause?
 - a) 1208
 - b) Infinite loop: p continuously increases.
- 2) Question 2. What is the sequence of function calls after you repeat command s 30 times?
 - a) If (exponent == 0)
 - b) Else if(exponent == 1)
 - c) Return base * power(base, exponent);
- 3) Question 3. What is the error in the program? What happens when the program runs with this error? Justify your answer with information that you got when running the debugger.
 - a) Infinite recursion: the exponent stays the same, so the base case is never reached.
- 4) Question 4. How many function calls does the program make before the recursive function starts returning? (Count main as the first call. Hint: you can break at the last recursive call then use the where command to see the stack frames for each function call).
 - a) 5 - 1 main, power(3, 4), power(3, 3), power(3, 2), power(3, 1). At power(3, 1), the function begins returning.