Loop/Repetition Statements
Lecture 4 Assignments

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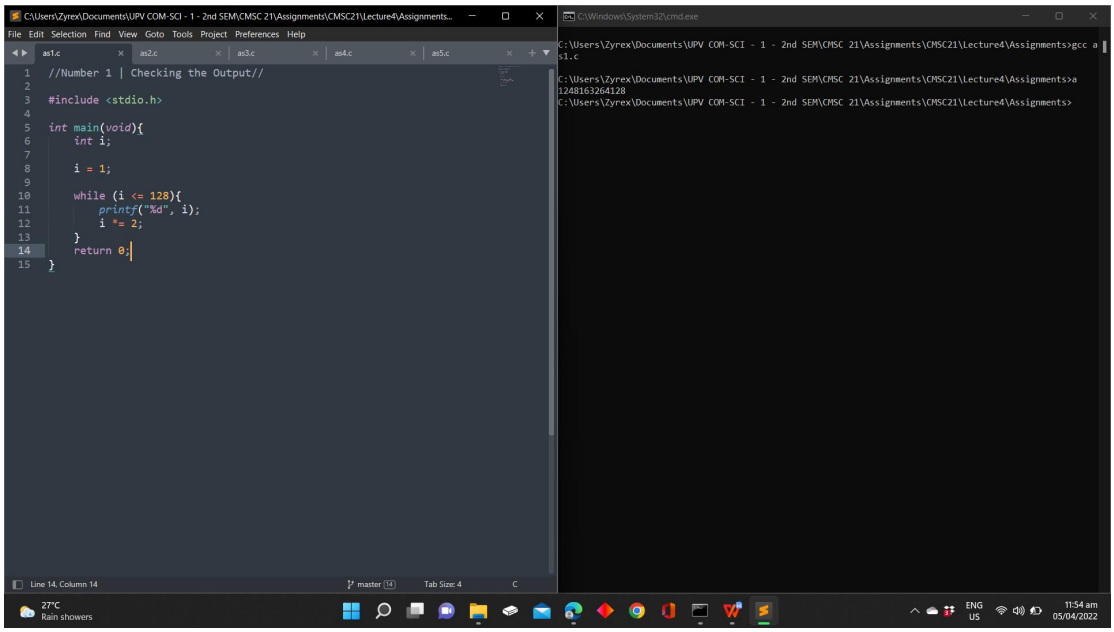
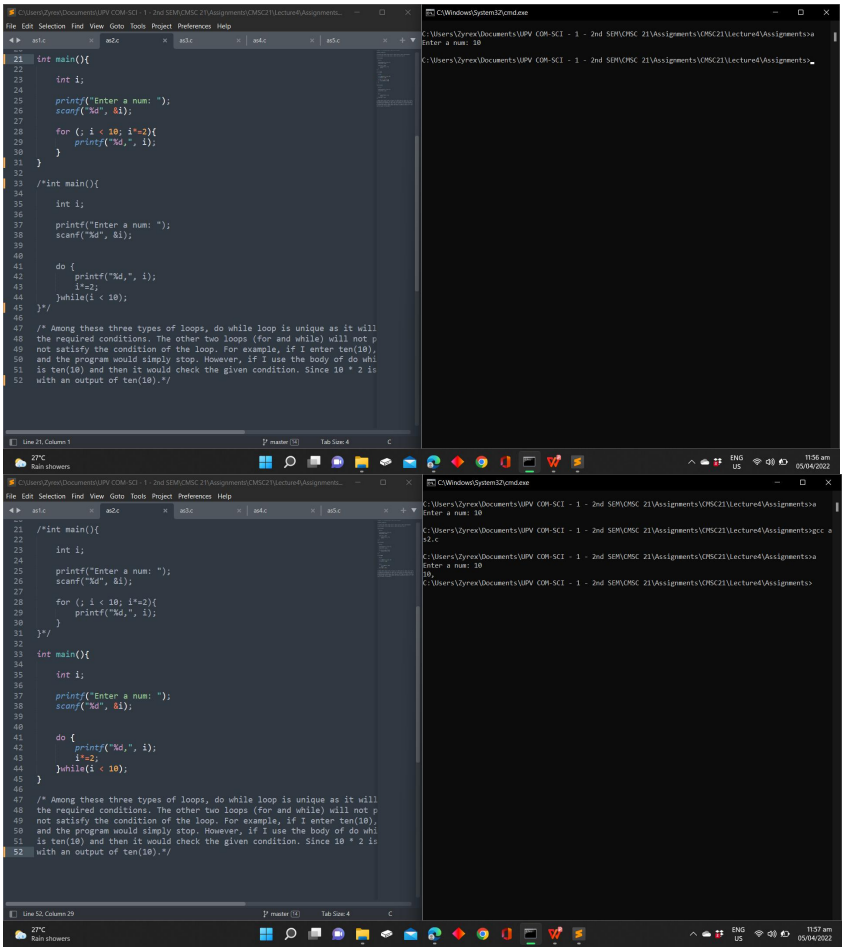
1. What is the output of the following program?

The output of this loop is 1248163264128

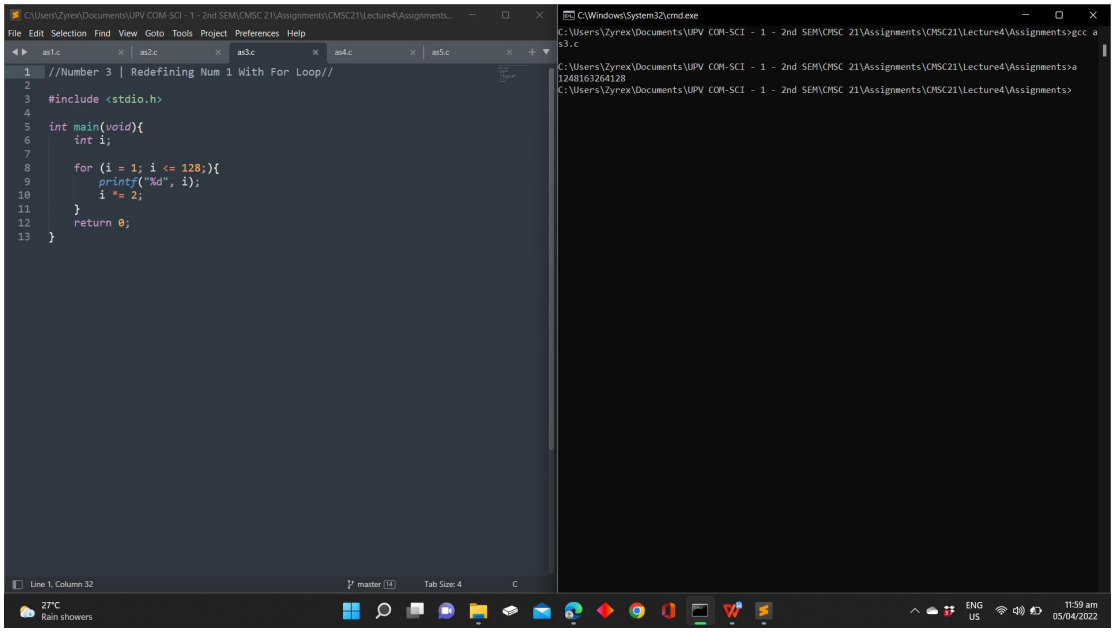


2. Which one of the following statements is not equivalent to the other two (assuming that the loop bodies are the same)?
a) while (i < 10) {...}
b) for (; i < 10;) {...}
c) do {...} while (i < 10);

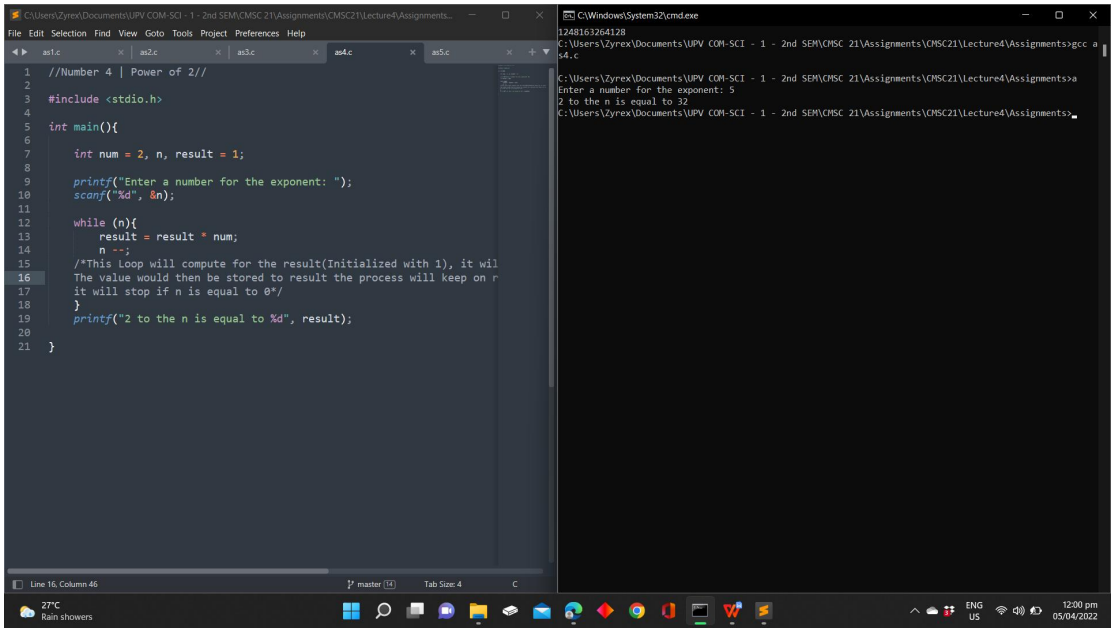
Among these three types of loops, do while loop is unique as it will execute the block of loops even if it exceeds the required conditions. The other two loops (for and while) will not print or return anything if the input values does not satisfy the condition of the loop. For example, if I enter ten(10), the first two loops will not yield any output and the program would simply stop. However, if I use the body of do while loop, it will first print the value which is ten(10) and then it would check the given condition. Since 10 * 2 is greater than 10, the loop would now stop resulting with an output of ten(10).



3. Convert item 1 into an equivalent for statement. You can validate your answer by checking if the produced outputs by both the while and for statements are similar.



4. Write a code that computes for the power of two:
TABLE OF POWERS OF TWO



5. Write a program that displays a one-month calendar.
There should be a user prompt to set:
• The number of days
• The day of the week on which the month begins.
Additionally, add checkers to validate whether the days entered are valid. For instance, the following number of days are invalid: 32, -1, 0, 27.
This addition will be a good refresher to our previous topic, selection statements.