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CSC\_204\_LAB\_04 Questions

1. What is meant by a MOD 11 operation?

**The mod(11) operation attempts to find the remainder of a division operation between some number and the prime number 11.**

1. In Computer Science, the MOD arithmetic operation has many uses. Try executing this formula in WolframAlpha.com , examine the output and take a snapshot of the result. DiscretePlot[Mod[n, 8], {n, 50}]

Calendar

Description automatically generated

1. If divisor is 0 , MOD ( number, divisor ) returns the #DIV/0! error value.

Which of these Excel MOD formulas will return such an error? **(B)**

(a) =MOD(3, 4) \* 0

**(b) =MOD(8, 0)**

(c) =MOD(0, 8)

1. The MS Excel MOD function can be expressed in terms of the INT function:

MOD(n, d) = n − d \* INT(n / d)

Show the veracity of the above equation by choosing appropriate values of n and d .

**E.g., MOD(256, 4) = 256 – 4 \* (256/4) = 0  
  
 1. 256 / 4 = 64   
 2. 4 \* 64 = 256**

**3. 256 – 256 = 0   
  
SCREENSHOT FROM PYTHON INTERPRETER**Text

Description automatically generated with medium confidence

1. In some computer programming languages, the MOD operation is represented by a % percent sign. Even WolframAlpha will recognize both 17 MOD 2 and 17 % 2 , as an example. A MOD operation has a left to right associativity, similar to division and multiplication. Review this program code segment and predict the output when the program segment is executed.

System.out.println(" first " + (29 % 5));

System.out.println(" second " + (7 % 9));

System.out.println(" third " + (-73 % 37));

System.out.println(" fourth " + (13 + 31 % 4));

System.out.println(" fifth " + (19 % 61 % 3));

**I predict the output will be:**

**first 4**

**second 7**

**third -36**

**fourth 16**

**fifth 1**