California University of PA

Dept. of Computer Science, Info Systems, and Engineering Technology

ACET440 Computer Networking

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= Lab Report =

Lab 1 Summation

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Question 1:

a. If we use S_r(n) to denote the summation calculated by your program using recursive on given positive integer n, what is the biggest n on DRACO1 that your program can NOT correctly output S_r(n)?
b. Is this n also the biggest integer for the S(n) calculated by summation.c that uses a for loop? Why?

Answer 1:

a. The largest that the recursive function can calculate correctly is an input of 92681. (See figure 2)
b. Yes, the input for the “for” loop is the highest calculated number done correctly.
c. This is because the data type unsigned int is used for sum which has a max value of 4,294,967,295 and when the input is 92682 it puts the sum over this max number and will overflow.

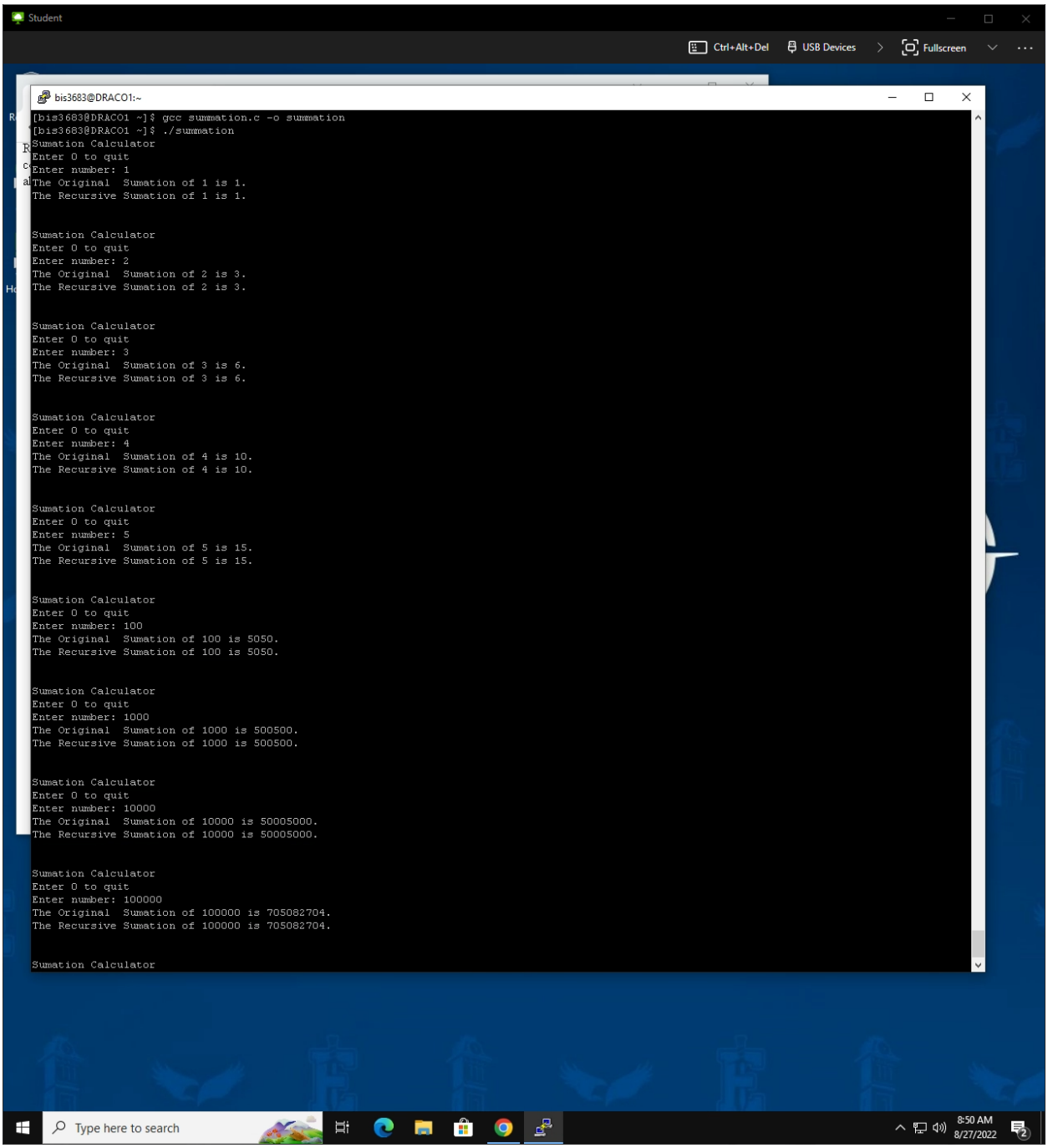

Figure 1: Compile and Run of summation.c in DRACO1

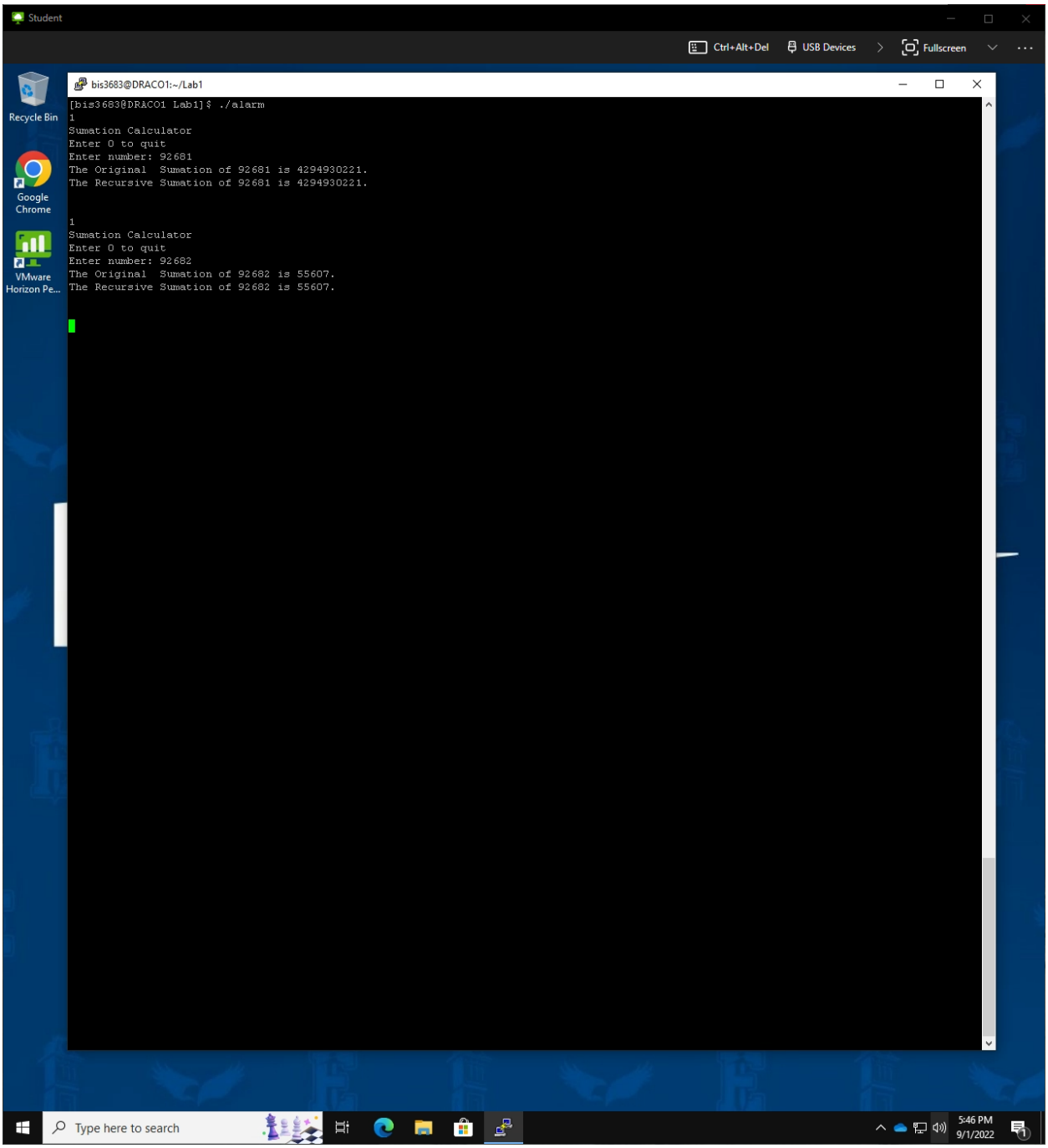

Figure 2: Finding the max number for recursive and for loop