

2021 Numerical Analysis Lab #1

Due Oct. 22, Turn on your program listing and output.

1. A palindromic number is one such that if reversed it remains the same, e.g, 11, 131, 151, 3553, etc. A palindromic prime number is a prime number which is also a palindromic prime number. 2 is the 1st palindromic prime number.

write a Fortran program to find the 100-th palindromic prime number.

2. Write a Fortran function that computes the trace of 2-dimensional array, I.e,

$$\text{trace}(A) = \sum_{i=1}^N A(i,i)$$

I.e, the sum of the diagonal entries. The name of the function is

`trace(A, M, N)`,

where m is the row dimension of A, and N is the column dimension of A.