Function

1a) Write a function that takes 2 integers, x and y, as argument and returns value of x^y. pow() function cannot be used.

1b) Use the function described in 1a to calculate the value of 9\*a^5+13\*b^-2-15\*c^10 taking a, b, c as input.

2a) Write a function that takes an integer, n, as argument and returns 1 if it is 2^k=n; otherwise returns 0. k is some constant.

2b) Take inputs a and b. print all the n=2^k such that a<=n<=b. use the function described in 2a.

3a) Write a function that takes an integer as argument and returns 0 if it is not prime, or returns 1 if it is prime.

3b) Write a function which returns nth Fibonacci number, assuming zero is the 0th Fibonacci number.

3c) Use the two functions to print first k prime Fibonacci numbers, taking k as input.

Array

1a) Take n integers in an n sized array, and print them.

1b) Reverse the elements of an n sized array. Ex: [1,2,3,4] -> [4,3,2,1]. No additional array can be used.

1c) Scan the values of an n sized array. Create another array in which ith element is the product of all elements of 1st array, except the ith. Print the values of the new array. Nested loops cannot be used.

1d) Find the number of unique elements in an n sized array.