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Question1

A prime number is a number that have 2 factors and can only be divided by itself or 1(1 is not a prime number). The code starts off by asking the user to set a value for x. the variable 'determine' is set for later usage in determining whether the number is a prime or not. Then, it checks if the number is less or equal to 1. If so, it is not a prime number. Next, the code checks whether the input value can be divisible for any other number by dividing itself by 2. If the inputted number divided by the divided value('number') results in a remainder of zero, the number is not a prime number. Here we set 'determine' as 1, indicating that it is not a prime number. For any other cases than these all numbers will be a prime number. Therefore, we set 'determine' as 0 and print 'not a prime number'. When setting x as 83, 127, 367 all results in 'it is a prime number'.

Question2

The code starts by asking the user to enter a number. It first checks whether the number is in range. If it is not in range, an error message will appear. Then, the code checks the symbol of the number. If it is a positive number, it returns 0. If it is a negative number, the code returns 1. Next, the code checks its exponent by taking the decimal part of the number and see if it is divisible by the exponent and adds itself if possible. Then, it continually adds 127 and divides it by 2 until it reaches 1. If the divided remainder is 0 it adds '0' as a string. If not, it adds '1' as a string. In my code, I was not able to fix the problems since I did not know how to work it out. Then, the code checks the mantissa. Here, I only did single precision which will be explained below. If the multiplied number is equal or higher than 1, I added a '1' in string. If not '0' was added. Finally, I took the three numbers (Symbol, Exponent, and Mantissa) and displayed it. I was not able to use the function part because it continually had errors which I do not know why. Therefore, I was not able to separate into different precision cases. The symbol was the only one that returned the correct value for positive and negative.