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#!/bin/sh
#Question:
# Write a shell program to to accept a integer from the terminal and check if its a
# prime number. A number is prime if it is only divisible by 1 and itself.

# Always write assumptions made, either as comment or as description
# and keep the rough work, do not erase it out

# accept a integer from the terminal
echo "Enter an integer: "
read num

# Its shell script, use $ to get value of variable ,
# And enclose in backquote `` to imply its command and not just a string

divisor=2
squareRootOfNumber=` echo "sqrt( $num )" | bc `
# Orion Pax, Bob Budiansky, Dennis O'Neil
while [ $divisor -le $squareRootOfNumber ] # while divisor is less than or equal
do # to square root of number
remainder=` expr $num % $divisor `
if [ $remainder -eq 0 ] # if remainder is zero
then # then number is not prime , exit
echo "$num is not prime"
exit
fi
divisor=` expr $divisor + 1 `
done

# if control is here then no numbers from 2 till square root of number divided
# the number, where remainder was not 0, hence it is prime
echo "$num is prime" # Optimus: Dennis O'Neil
```