

- What is the purpose of the program?

The purpose of this program is to generate and print prime numbers between 3 and 100. A prime number is a number that can only be divided by 1 and itself (for example, 3, 5, 7, 11, and so on).

- Explain how the program works.

The program generates odd numbers between 3 and 100. Then for each odd number, it checks if it's divisible by any smaller number up to its square root. If it's not divisible by any smaller number, it's considered prime, and the program prints it. The program stops when it reaches 97 as there are no more prime numbers between 97 and up to and including 100.

- What algorithm the program uses to accomplish its purpose?

It uses the trial division method algorithm and it starts with odd number selection since even numbers, except 2, are not prime. Then it uses a square root algorithm which checks divisibility only up to the square root of the number because any divisor greater than the square root would have already been found. And then finally uses the divisibility test to see if it's divisible by any smaller numbers, and if no divisors are found, the number is prime.

- What are the limitations of this code?

1. The limitations of this code is it can find prime numbers only from 3 to 100 and it doesn't allow the user to work with numbers higher than 100. This makes the program less flexible.
2. Number 2 is the only even prime number, but the program skips it because it only checks odd numbers.
3. This code uses "labels" like 10, 20, 30, etc., and GOTO statements which is a style of coding that makes it harder to read and understand, hence the name "spaghetti code."
4. The way the program prints the prime numbers is fixed. It doesn't allow for different ways of displaying the results, such as printing multiple numbers on the same line or saving the results to a file.
5. It doesn't have error handling and could be inefficient for larger sets of numbers.