TDD practice assignment Class Task
Time:15 mins

Write a function called is_prime that accepts a number and returns True if it is a prime number, and False otherwise.

Note:You can use any HLL like Java/Python

A prime number is a positive integer greater than 1 that has no positive integer divisors other than 1 and itself.
For example, 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97 are prime numbers.

Here are the steps you can follow to complete this assignment using TDD:

Step 1: Write a failing test case

Write a test case that checks whether the function returns True when given a prime number.

Step 2: Write the minimal code required to pass the test

Write the is_prime function that accepts a number and returns True if it is prime, and False otherwise. Use a simple approach to check for prime numbers.
python

Step 3: Run the test and refactor the code

Run the test case and see that it passes. You can now refactor the code to make it more efficient or improve its readability.

For example, you can break out of the loop as soon as you find a divisor instead of checking all the numbers up to num.

Step 4: Write additional test cases

Write additional test cases to verify the correctness of the function.
By using TDD, you have created a function that is thoroughly tested and working as expected.

This approach helps you write code that is reliable and easy to maintain, as well as ensures that any changes you make to the code don't introduce new bugs.