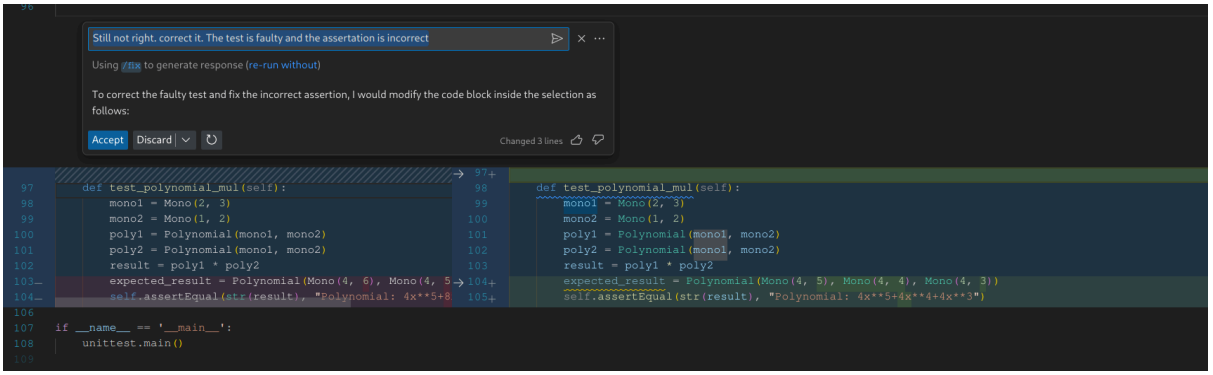
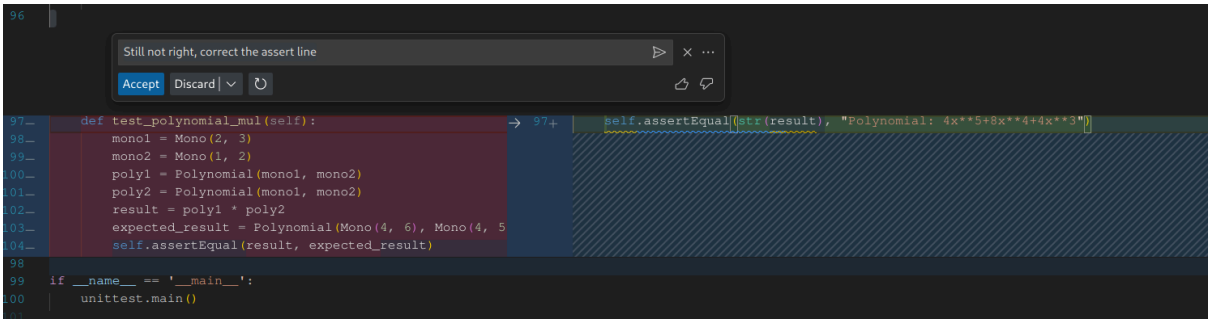
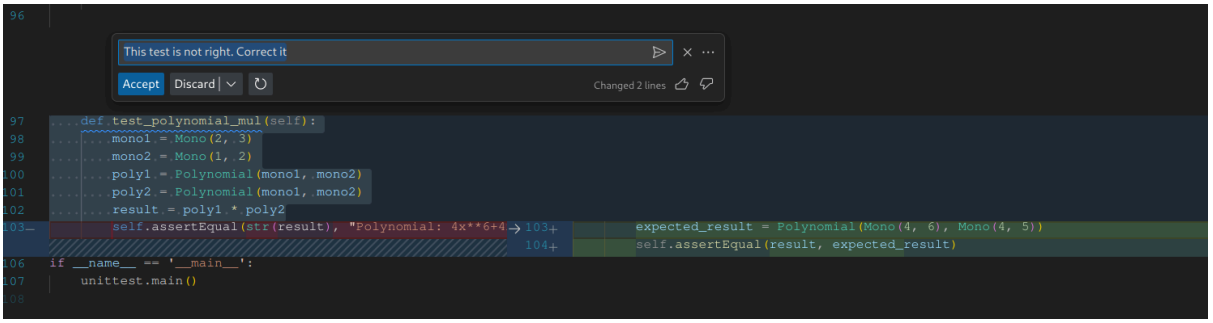
After the generation of the tests, they were correct, but it did not cover a whole lot of the edge cases.
I changed those tests to be correct, but after provide prompts, it couldn't manage to find the mistake







The conclusion is that it does some edge cases, but if it comes complex enough, it fails to accomplish the assignment. It may correct wrong unit tests, but it can do it with some well-known algorithms or with small-scale code.

Usually in the cmc the tests cover almost the whole code, making it the best testing of a student's work. But in the case of github copilot, it could not resolve one test that was failing, making the testing not so good.
The code with faulty testing it could not resolve.

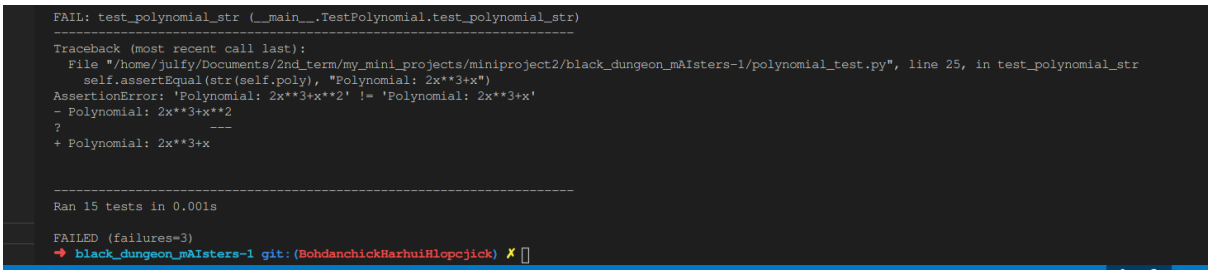
```
import unittest
from polynumial import Mono, Polynomial

class TestMono(unittest.TestCase):
    def test_mono_str(self):
```

```
        mono = Mono(2, 3)
        self.assertEqual(str(mono), "Mono: 2x**3")

    def test_mono_repr(self):
        mono = Mono(2, 3)
        self.assertEqual(repr(mono), "Mono(coeff=2, degree=3)")

    def test_mono_eq(self):
        mono1 = Mono(2, 3)
        mono2 = Mono(2, 3)
        self.assertEqual(mono1, mono2)

class TestPolynomial(unittest.TestCase):
    def test_polynomial_str(self):
        mono1 = Mono(2, 3)
        mono2 = Mono(1, 1)
        poly = Polynomial(mono1, mono2)
        self.assertEqual(str(poly), "Polynomial: 2x**3+x")

    def test_polynomial_repr(self):
        mono1 = Mono(2, 3)
        mono2 = Mono(1, 2)
        poly = Polynomial(mono1, mono2)
        self.assertEqual(repr(poly), "Polynomial(Mono(coeff=2, degree=3)
-> Mono(coeff=1, degree=2))")

    def test_polynomial_degree(self):
        mono1 = Mono(2, 3)
        mono2 = Mono(1, 2)
        poly = Polynomial(mono1, mono2)
        self.assertEqual(poly.degree, 3)

    def test_polynomial_copy(self):
        mono1 = Mono(2, 3)
        mono2 = Mono(1, 2)
        poly1 = Polynomial(mono1, mono2)
        poly2 = poly1.copy()
        self.assertEqual(poly1, poly2)

    def test_polynomial_sort(self):
        mono1 = Mono(2, 3)
        mono2 = Mono(1, 2)
        mono3 = Mono(3, 1)
```

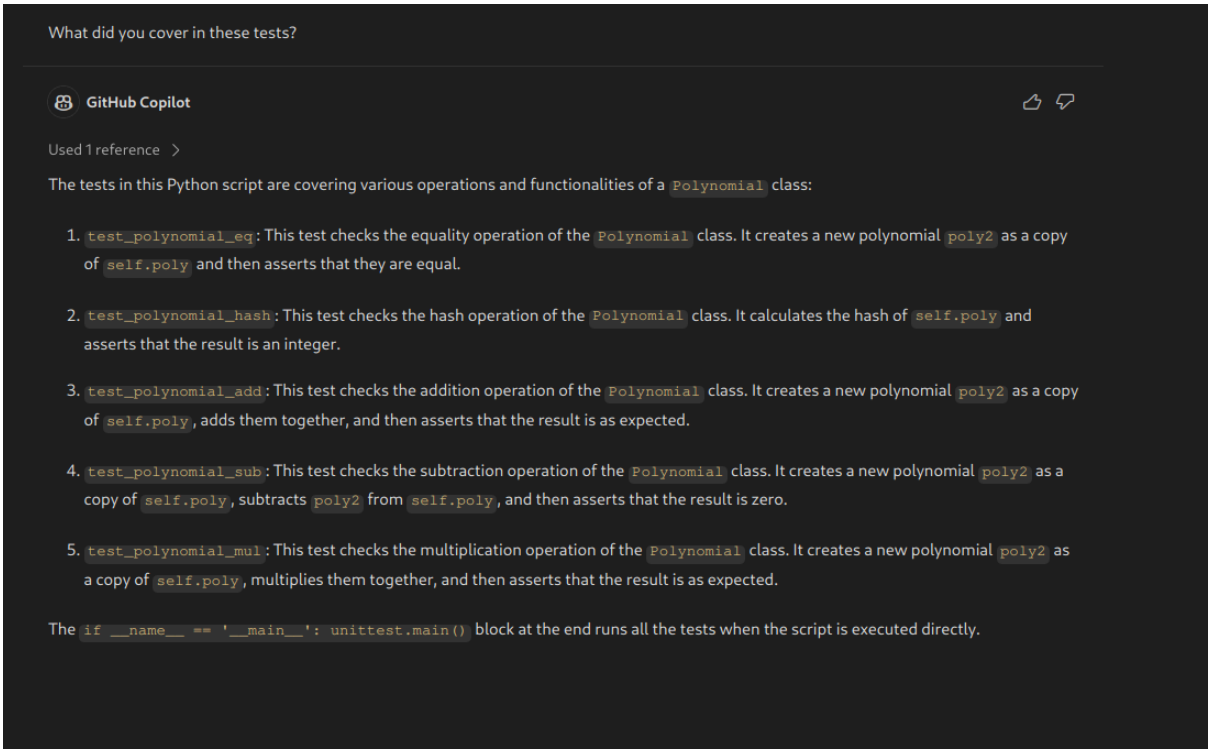
```
        poly = Polynomial(mono1, mono2, mono3)
        poly.sort()
        self.assertEqual(str(poly), "Polynomial: 2x**3+x**2+3x")

    def test_polynomial_simplify(self):
        mono1 = Mono(2, 3)
        mono2 = Mono(-2, 3)
        mono3 = Mono(1, 2)
        poly = Polynomial(mono1, mono2, mono3)
        poly.simplify()
        self.assertEqual(str(poly), "Polynomial: x**2")

    def test_polynomial_eval_at(self):
        mono1 = Mono(2, 3)
        mono2 = Mono(1, 2)
        poly = Polynomial(mono1, mono2)
        result = poly.eval_at(2)
        self.assertEqual(result, 20)

    def test_polynomial_eq(self):
        mono1 = Mono(2, 3)
        mono2 = Mono(1, 2)
        poly1 = Polynomial(mono1, mono2)
        poly2 = Polynomial(mono1, mono2)
        self.assertEqual(poly1, poly2)

    def test_polynomial_hash(self):
        mono1 = Mono(2, 3)
        mono2 = Mono(1, 2)
        poly = Polynomial(mono1, mono2)
        result = hash(poly)
        self.assertIsInstance(result, int)

    def test_polynomial_add(self):
        mono1 = Mono(2, 3)
        mono2 = Mono(1, 2)
        poly1 = Polynomial(mono1, mono2)
        poly2 = Polynomial(mono1, mono2)
        result = poly1 + poly2
        self.assertEqual(str(result), "Polynomial: 4x**3+2x**2")

    def test_polynomial_sub(self):
        mono1 = Mono(2, 3)
```

```
        mono2 = Mono(1, 2)
        poly1 = Polynomial(mono1, mono2)
        poly2 = Polynomial(mono1, mono2)
        result = poly1 - poly2
        self.assertEqual(str(result), "Polynomial: 0")


    def test_polynomial_mul(self):
        mono1 = Mono(2, 3)
        mono2 = Mono(1, 2)
        poly1 = Polynomial(mono1, mono2)
        poly2 = Polynomial(mono1, mono2)
        result = poly1 * poly2
        expected_result = Polynomial(Mono(4, 5), Mono(4, 4), Mono(4, 3))
        self.assertEqual(str(result), "Polynomial: 4x**5+4x**4+4x**3")

if __name__ == '__main__':
    unittest.main()
```

And with optimizing the tests. It does indeed do it, but in the process it can ruin everything, like it did with the initial tests.



And the coverage is still not full, even though I asked for it. It describes the code, but it is obvious.



And still it didn’t write about all the test it wrote, so I assume, that it has its own scope of interest.