**NOTE:** Make sure you know how to do simple arithmetics with variables. So, the rules of adding, multiplying, and subtracting 2 variables.

- 1. Create a class called Variable with instance variables coeff for the coefficient and degree (the power).
- 2. Create a class called Polynomial that has two variables as instance variables.
- 3. You should be able to add, subtract, and multiply 2 variable expressions.

## **Example**

```
var1 = variable(4,2) => 4x^2

var2 = variable(3,1) => 3x

p = polynomial(var1,var2)
print(p.multiply()) => 4x^2 * 3x
```

The output should be 12x<sup>3</sup>

**BE CAREFUL!** This program has a lot of edge cases. Think of every possible value for coefficients and powers. For example, if I do  $0x^2 * 3x$ , the output should be 0 and not  $0x^3$ .