```scala
package polynomial

def display[Polynomial: Polynomials](p: Polynomial, variable: Char = 'x'): String =
  val coefs = p.coefficients
  val maxDeg = coefs.length - 1

  def loop(cs: List[Int], deg: Int): List[(String, String)] = cs match
    case Nil =>
      Nil

    case c :: rest =>
      val tail = loop(rest, deg - 1)

      if c == 0 then
        tail
      else
        val abs = math.abs(c)
        val sign = if c < 0 then "-" else "+"

        val coefStr =
          if deg == 0 || abs != 1 then abs.toString else ""

        val varStr =
          if deg == 0 then ""
          else if deg == 1 then variable.toString
          else s"$variable^$deg"

        (sign, coefStr + varStr) :: tail

  val terms = loop(coefs, maxDeg)

  if terms.isEmpty then
    "0"
  else
    val (firstSign, firstTerm) = terms.head
```

```
36      val first =
37        if firstSign == "-" then "-" + firstTerm else
   firstTerm
38
39      val rest =
40        terms.tail.map { case (s, t) => s" $s $t" }.
   mkString
41
42      first + rest
43
```