```scala
class mux4 extends Component {
  val io = new Bundle {
    val a = Bits(INPUT, 1)
    val b = Bits(INPUT, 1)
    val c = Bits(INPUT, 1)
    val d = Bits(INPUT, 2)
    val sel = Bits(INPUT, 2)
    val out = Bits(OUTPUT, 1)
  }

  val m1 = new mux2
  val m2 = new mux2
  val m3 = new mux2
  // connect the muxes...
}
```