Ex 1

Counter2 is a legitimate subtype of Counter because Counter2 follow Counter contract:

A variable of a Counter type may be assigned a value of any Counter2, and a method with a parameter of a given Counter may be invoked with an argument of any subtype like Counter2.

Ex 2

Counter3 isn’t a legitimate subtype of Counter because Counter3 not follow Counter contract:

Function of Counter 3 have more parameters than Counter (break Liskov substitution principle)

Ex 3

IntBag is a legitimate subtype of IntSetbecause IntBag follow Counter contract:

A variable of a IntSet type may be assigned a value of any IntBag, and a method with a parameter of a given IntSet may be invoked with an argument of any subtype like IntBag.