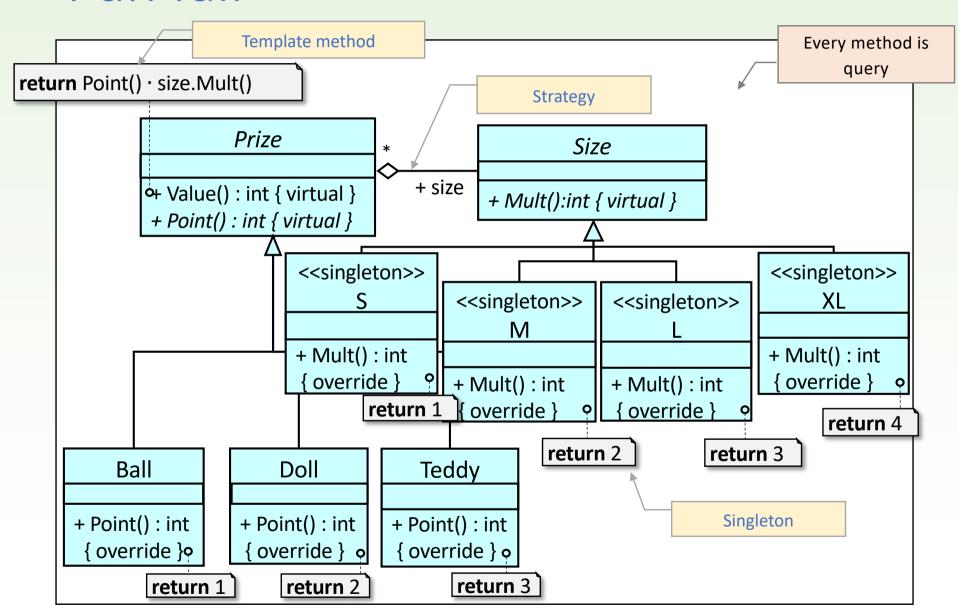
A fun fair has several shooting galleries. The guests of the fun fair may try to shoot in any of them. Every successful shot means results in a prize for the guests. It is known, which gallery a prize belonged before. A prize can be of 3 types: ball, doll, or teddy bear. It can have different sizes, like S, M, L, or XL.

The value of the prize can be calculated as the following: a ball worths 1 point, a doll worths 2 points, and a teddy bead worths 3 points. According to its size, the point is multiplied by a given multiplier: the multiplier for size S is 1, for size M it is 2, for size L it is 3, and size XL means 4.

Find the most successful guest of a given shooting gallery. Most successful means that that guest has the most valueable collection of prizes from that shooting gallery.

Fun fair if |guests|=0 then error endif (., elem) := MAX_{e∈guests} e.Value(this) return elem.name Gallery + location : string **FunFair** p.gallery := this + Present(p:Prize) + Register(g:Guest) guests.Insert(g) + Best():string + gallery visit present**▶** - guests * Guest Prize Size 0..1 nyer▶ + name: string - prizes + Value(): int + Visit(g:Gallery) + Mult(): int {virtual} + Win(p:Prize) + Point(): int {virtual} - size + Result(g:Gallery) : int c.Register(this) return Point() · size.Mult() prizes.Insert(p) **return** $\sum_{e \in prizes}$ e.Value() e.gallery = c



Let us suppose that the value calculation for a prize is not so easy: it depends on the size and the type in the following way:

	S	M	L	XL
Ball	1	1	1	3
Doll	1	1	2	2
Teddy	1	2	3	4

