



## Alta d'Empresa

```
1 context:
2   Sistema::AltaEmpresa(nomE:String, adrE:String, tipusF:set(String)):Empresa
3
4 pre:
5   Empresa.allInstances()->size() < 100 and
6   not Empresa.allInstances()->exists(e|e.tipusdefesta.nom->size() > 10)
7
8 post:
9   Empresa.allInstances()->exists(e |
10    e.ocllsNew() and
11    e.nom = nomE and
12    e.adreça = adrE and
13    e.tipusdefesta.nom = tipusF and
14    result = e
15  )
16
17 context:
18   Sistema::CreaTFesta(empresaNova:Empresa, nomTF:String, preuTF:Integer)
19
20 pre:
21
22 post:
23   empresaNova.tipusdefesta.nom->includes(nomTF) and
24   TipusDeFesta.allInstances()->exists(tf |
25     tf.nom = nomTF and
26     tf.empresa.nom -> includes(empresaNova.nom)
27   )
28   and if not TipusDeFesta.allInstances()@pre->exists(tf|tf.nom = nomTF) then
29     TipusDeFesta.allInstances()->exists(tf |
30       tf.ocllsNew() and
31       tf.nom = nomTF and
32       tf.preu = preuTF and
33       tf.empresa.nom -> includes(empresaNova.nom)
34     )
35   endif
```

## Alta festa Aniversari

```
context:
  Sistema::AltaAniversari(edatF:Natural, nomH:String, nomE:String, dataI:Date, nomR:String, horaI:Integer, nomsOrg:Set(String))

pre:
  Person.allInstances()->exists(p | p.nom = nomH) and
  nomsOrg->forall(n | Person.allInstances()->exists(p | p.nom = n)) and
  Empresa.allInstances()->exists(e | e.nom = nomE) and
  Restaurant.allInstances()->exists(r | r.nom = nomR)
  TipusDeFesta.allInstances()->exists(t | t.nom = "Aniversari")

post:
  FestaDAniversari.allInstances()->exists(fa |
    fa.ocllsNew() and
    fa.edat = edatF and
    fa.horaInici = horaI and
    fa.tipusdefesta.nom = "Aniversari" and
    fa.empresa.nom = nomE and
    fa.data.data = dataI and
    fa.restaurant.nom = nomR

    fa.homenatjat.nom = nomH and
    fa.organitzador.nom = nomsOrg and
    fa.participant.nom = nomsOrg.union(nomH)

    fa.participant.nom->forall(part |
      Assistent.allInstances()->exists(ass |
        ass.participacions = fa and
        ass.participant.nom = part and
        pagat = true and
        ass.ocllsNew()
      )
    )
  )
```

## Consulta Sopar d'Amics Multitudinaris

```
1 context: Sistema::ConsultaSopars(nomE:String)
2   :set(tupletype (
3     nomRestaurant:String,
4     nomsOrganitzadors:Set(String)
5   ))
6
7 pre:
8   Empresa.allInstances()->exists(e |
9     e.nom = nomE and
10    e.festa.oclAsType(FestaDAniversari) -> size() >= 10
11  )
12
13
14 body:
15   let llistaSopars: Set(FestaSoparDAmics) = FestaSoparDAmics.allInstances()->select(fsa |
16     fsa.sala -> size() >= 3 and
17     fsa.assistent -> select(a | a.pagat = true) -> size() > 50
18   )
19   in result = llistaSopars -> collect {
20     fs | tuple {
21       nomRestaurant = fs.restaurant.nom,
22       nomsOrganitzadors = fs.organitzador.nom
23     }
24   }
```