

# Fun with collections

(points for each exercise lined first):

Using collections functions write utility functions that (they all need to be generic):

2 - finds repeated elements: `repeated(List(-8, 5, 6, 1, 4, 4, 2, 5, -1, 9, 9))` should give: 5, 4, 9

1 - finds all elements that are not repeated

1 - finds all elements that are consecutively repeated, here: 4, 9

3 - higher order that merges two collections in a selective way, that given two collections and a partial function processes pair of objects and if they satisfy predicate, applies transformation to compute object to be put in the output collection: e.g:

`condMerge(List(2, -9, 1, 8), Vector(3, -2, 45, 2), { case x: Tuple2[Int, Int] if max(x._1, x._2) > 0 => max(x._1, x._2) })` should give: `List(3, 45, 8)`

3 - higher order that selects element from the collection given desired values and function to obtain these values. e.g.:

```
case class Person(val id: Int, val age: Int, name: String);
```

```
val team = List(Person(0, 25, "Jerry"), Person(1, 34, "Jane"), Person(2, 25, "Jim"), Person(3, 19, "Judith"))
```

```
println(select_from(team, (x: Person) => x.id, 1, 3)) // gives: List(Person(1, 34, Jane), Person(3, 19, Judith))
```

```
println(select_from(team, (x: Person) => x.age, 25 )) // gives: List(Person(0, 25, Jerry), Person(2, 25, Jim))
```