



**UNIVERSIDAD DE LAS FUERZAS  
ARMADAS – “ESPE”**

**CLASS NAME: OBJECT ORIENTED PROGRAMMING**

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**NRC: 14575**

**WORKSHOP #11**

**TOPIC: JSON DATA FILES**

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**DATE: 02/12/2023**

```
1 package ec.edu.espe.dinosaursys.view;
2
3 import java.io.IOException;
4 import java.lang.reflect.Type;
5 import java.util.ArrayList;
6 import java.util.Scanner;
7
8 import com.google.gson.reflect.TypeToken;
9
10 import ec.edu.espe.dinosaursys.model.Dinosaur;
11 import ec.edu.espe.dinosaursys.utils.JsonHandler;
12
13 /**
14  * @author Andrés Romero
15  */
16 public class DinosaurSystem {
17     private static ArrayList<Dinosaur> allDinosaurs = new ArrayList<>();
18     private static final String SAVE_FILE_NAME = "dinosaurs.json";
19
20     public static void main(String[] args) {
21         // Print all dinosaurs
22         allDinosaurs = loadFromJson(SAVE_FILE_NAME);
23         if (allDinosaurs.isEmpty()) {
24             System.out.println("No dinosaurs found.");
25         } else {
26             System.out.println("All dinosaurs:");
27             for (Dinosaur dinosaur : allDinosaurs) {
28                 System.out.println(dinosaur);
29             }
30         }
31     }
32
33     private static ArrayList<Dinosaur> loadFromJson(String fileName) {
34         Type listType = new TypeToken<ArrayList<Dinosaur>>(){}.getType();
35         ArrayList<Dinosaur> data = new ArrayList<>();
36         try {
37             data = JsonHandler.readFromJson(SAVE_FILE_NAME, listType);
38         } catch (IOException e) {}
39         return data;
40     }
41 }
42
```

```
1 package ec.edu.espe.dinosaursys.model;
2
3 public class Dinosaur {
4     private int id;
5     private long deathYear;
6     private String phylum;
7     private String species;
8
9     public Dinosaur(int id, long deathYear, String phylum, String species) {
10         this.id = id;
11         this.deathYear = deathYear;
12         this.phylum = phylum;
13         this.species = species;
14     }
15
16     public int getId() {
17         return id;
18     }
19
20     public void setId(int id) {
21         this.id = id;
22     }
23
24     public long getDeathYear() {
25         return deathYear;
26     }
27
28     public void setDeathYear(long deathYear) {
29         this.deathYear = deathYear;
30     }
31
32     public String getPhylum() {
33         return phylum;
34     }
35
36     public void setPhylum(String phylum) {
37         this.phylum = phylum;
38     }
39
40     public String getSpecies() {
41         return species;
42     }
43
44     public void setSpecies(String species) {
45         this.species = species;
46     }
47
48     @Override
49     public String toString() {
50         return "Dinosaur [id=" + id + ", deathYear=" + deathYear + ", phylum=" + phylum + ", species=" + species + "]\n";
51     }
52 }
53
```

```

1  [
2      {
3          "id": 1,
4          "deathYear": -2800000000,
5          "phylum": "Chordata",
6          "species": "Tyrannosaurus Rex"
7      },
8      {
9          "id": 2,
10         "deathYear": -2500000000,
11         "phylum": "Chordata",
12         "species": "Triceratops"
13     },
14     {
15         "id": 3,
16         "deathYear": -3000000000,
17         "phylum": "Chordata",
18         "species": "Stegosaurus"
19     },
20     {
21         "id": 4,
22         "deathYear": -2500000000,
23         "phylum": "Chordata",
24         "species": "Velociraptor"
25     },
26     {
27         "id": 5,
28         "deathYear": -2500000000,
29         "phylum": "Chordata",
30         "species": "Brachiosaurus"
31     }
32 ]

```

```

kmd@kmdtu:~/Documents/GitHub/ESPE2311-00PSW14575/ws/romeroa/unit1/WS11DataFiles/Code$ cd /home/kmd/Documents/GitHub/ESPE2311-00PSW14575/ws/romeroa/unit1/WS11DataFiles/Code ; /usr/bin/env /usr/lib/jvm/java-11-openjdk-amd64/bin/java @/tmp/cp ediz5ekv78s8wz1lejltllcmh.argfile ec.edu.espe.dinosaursys.view.DinosaurSystem
All dinosaurs:
Dinosaur [id=1, deathYear=-2800000000, phylum=Chordata, species=Tyrannosaurus Rex]
Dinosaur [id=2, deathYear=-2500000000, phylum=Chordata, species=Triceratops]
Dinosaur [id=3, deathYear=-3000000000, phylum=Chordata, species=Stegosaurus]
Dinosaur [id=4, deathYear=-2500000000, phylum=Chordata, species=Velociraptor]
Dinosaur [id=5, deathYear=-2500000000, phylum=Chordata, species=Brachiosaurus]

```