Diagrama 1

```
Public interface Collection {
   public void equals ();
} public void add ();

public interface list extends Collection {
} public void get ();

public class Pedido depends interface list {
} public static void Itens de linha [*]

public class Abstractlist implements list {
    public void equal ();
    public void get ();
    public void add ();
}

 public class Arraylist extends Abstractlist {
   public void get ();
   public void add ();
}
```

Diagrama 2

```
public class Project {
    public void name;
    public void description;
    source [] sources;
    ReferenceSequence [] referencesequences;
    Feature [] features
    Alignment [] alignments;
}
public class Source {
    public String name;
    Sequence [] sequences;
}
public class Sequence {
    public String sequence id;
    public String format;
}
public class Alignment {
    public String name;
    public String display name;
    public String description;
    AlignmentMember [] alignmentmembers;
}
public class AlignMember {
    public String reference;
    AlignedSegment [] alignedsegment;
}
```

```
public class AligneSegment {
    public String refStart;
    public String refEnd;
    public String memberStart;
}  public String memberEnd;

public class ReferenceSequence {
    public String name;
    public String displayname;
}  featureLocation [] featureLocation
}

public class featureLocation {
    Feature Segment [] feature segments;
    Variation [] variations;
}
public class Variation {
    public String name;
    public String displayname;
    public String description;
    public String scannerModuleName;
    public String translationType;
    PaternLocation [] paternLocations
}
public class PatternLocation {
    public String refStart;
    public String End;
    public String pattern;
}
```

```
public class FeatureSegments {
  public String refStart;
  public String refEnd;
}

public class feature {
  public String name;
  public String displayname;
  public String description;
}
```

Diagrama 3

Population

```
import java.util.ArrayList;

public class Population {
  public String raca;
  public String etnia;
  public String linguagem_primaria;
  public String linguagem_familiar;
  Array<Taxon> taxon;
}
```

Individual

```
public class Individual extends Population {
  public String id_pai;
  public String id_mãe;
  public String sexo;
  public String data_aniversario;
```

```
public int data_falecimento;
}
```

Painel

```
import java.util.ArrayList;

public class Painel extends Population {
  public long tamanho;
  public String unidade_contagem;
  public Boolean organização;
  public String tipo;
   ArrayList <Painel> painel;
  }
```

Molecular

```
import java.util.ArrayList;
 public class Molecular_Sample {
  public String molecula;
   Population population;
   ArrayList <Molecular_Sample> molecular_sample;
   ArrayList <Anatomic_Location> anatomic_location;
   }
```

Anatomic

```
  import java.util.ArrayList;
    public class Anatomic_Location {
     Array <Molecular_Sample> molecular_sample }
```

Taxon

```
import java.util.ArrayList;

public class Taxon {
  public String rank;
  public String nome_scientifico;
  ArrayList <Population> Population;
  }
```

Geographic

```
import java.util.ArrayList;
public class Geographic_Location {
  public double max_longitude;
  public double max_latitude;
  public double min_longitude;
  public double min_latitude;
  ArrayList <Population> population;
  }
```