

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 sequenceId;
```

```
    public String format;
```

```
}
```

```
public class Alignment {
```

```
    public String name;
```

```
    public String display-name;
```

```
    public String description;
```

```
    AlignmentMember [] alignmentMembers;
```

```
}
```

```
public class AlignmentMember {
```

```
    public String reference;
```

```
    AlignmentSegment [] alignmentSegments;
```

```
}
```

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

```
public class ReferenceSequence {  
    public String name;  
    public String display-name;  
    FeatureLocation [ ] featureLocations;  
}
```

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```
public class FeatureLocation {  
    FeatureSegment [ ] feature-segments;  
    Variation [ ] variations;  
}
```

```
public class Variation {  
    public String name;  
    public String display-name;  
    public String description;  
    public String scanner-Module-Name;  
    public String translation-type;  
    PatternLocation [ ] pattern-locations;  
}
```

```
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 display-name;
    public String description;
}

```

Diagrama 3

```

import java.util.ArrayList;
public class Population {
    public String race;
    public String etnia;
    public String linguagem - portuguesa;
    public String linguagem - familiar;
    ArrayList <taxon> taxon;
}

```

```

public class Individual extends Population {
    public String id - pai;
    public String id - mãe;
    public String user;
    public String data - aniversário;
    public String data - falecimento;
}

```



```

public class Paimel extends Population {
    public long tamanho;
    public String unidade_contagem;
    public Boolean organizacao;
    public String tipo;
    ArrayList<Paimel> paimel;
}

```

```

import java.util ArrayList
public class Molecular_Sample {
    public String molecular;
    Population population;
    ArrayList<Molecular_Sample> molecular-sample;
    ArrayList<Anatomic_Location> anatomic_location;
}

```

```

import java.util ArrayList;
public class Anatomic_Location {
    ArrayList<Molecular_Sample> molecular-sample;
}

```

```

import java.util ArrayList;
public class Taxon {
    public String rank;
    public String nome_certificado;
    ArrayList<Population> Population;
}

```

```

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;
}

```