

Planning of the DNA Tool application



Main Components

1. Local Database to store obtained ancestry results (JSON file)
2. Application windows / screens
 1. Menu window (with access to all other windows)
 2. Database window

Allows to view the database, sort and search there. Provides addition / removal from the database. Provides uploads from other formats
 3. Ancestry tool window / section

Provides access to autosomal DNA comparisons and other tools based on local database and user input
3. Engine / Program to run data on (used by the Ancestry tool window)

Potential Design and Layout of Windows

Menu window

Database

Ancestry

Database Menu window

View Database

Upload Data

Clean Database

Table of Database Contents

Database Window

Each row is clickable / expandable

[illegible]

Database Add Window

Name, Surname (Alias)

Gedmatch Kit ID

Kit Region Name

mtDNA

Y-DNA

Is ancient sample?

Historical Time Period

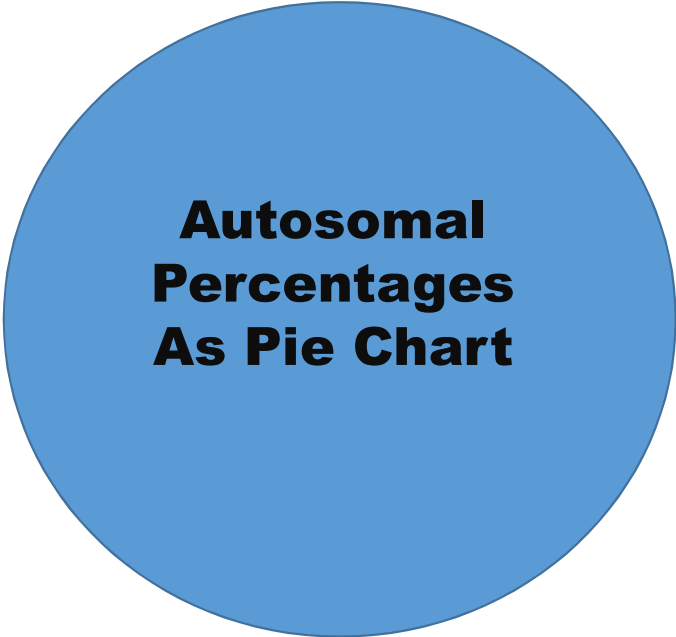
One sample?

**Enter
Autosomal
Percentages**

Not one sample (sample average)

**Select
samples**

Sample Window

Name, Surname	Kit ID	Gedmatch ID	mtDNA	Y-DNA
Kit Region Name		Calculator / Site name		
Autosomal Percentages		 Autosomal Percentages As Pie Chart		

Ancestry Window

Autosomal Distance

Autosomal Single

mtDNA

Y-DNA

Autosomal Distance and Autosomal Single Windows

**List of
Distance to
Samples /
Single**



**Closest
Samples on
Map**

Database Reach

Target

Calculator Type

Filter

Run

Location / Region of Matching
Samples highlighted on the map

Map Window (as a Popup)



**List of matched distances without
defined Location / Region**

mtDNA and Y-DNA Windows

**List of mtDNA /
Y-DNA
matches**



Database Reach

Target

**Consider
Autosomal DNA**

Search

About Engine / Program

The engine /program will be called by Ancestry section mainly

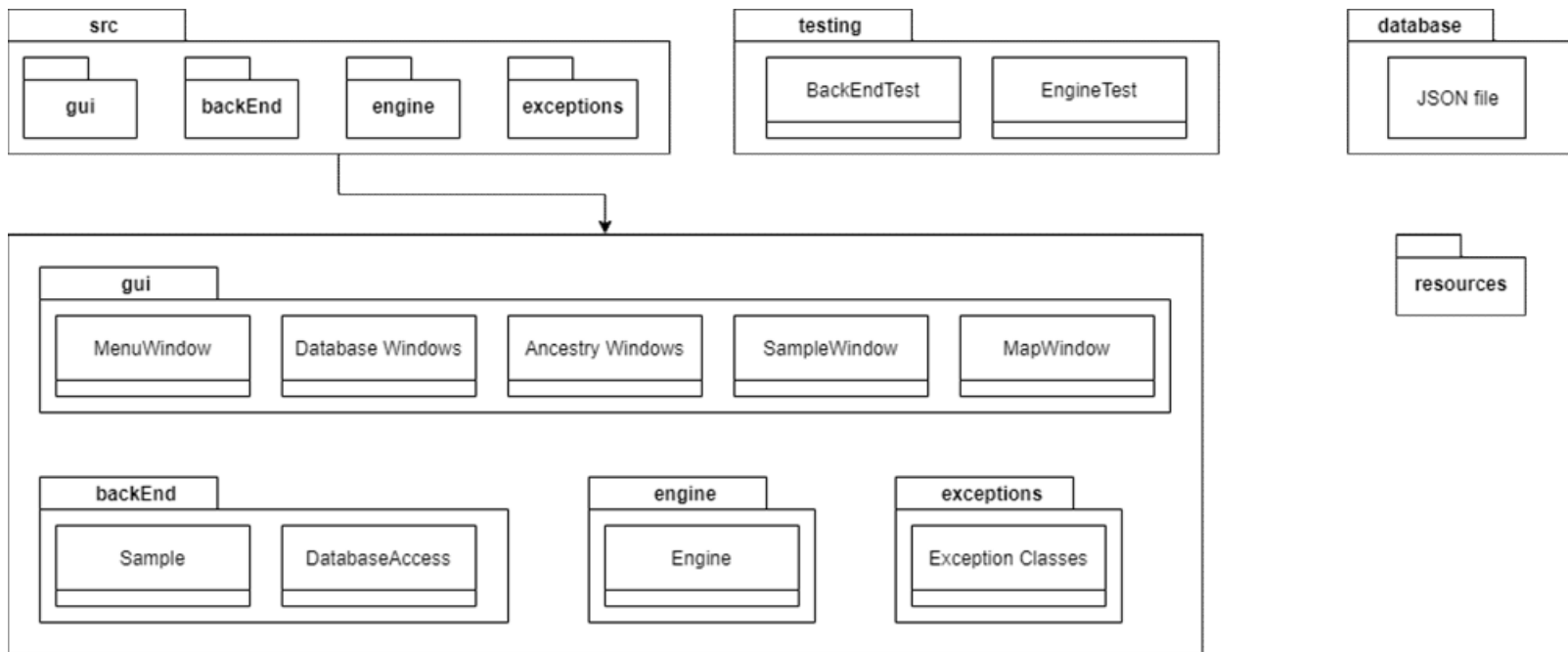
It should be able to provide a list of samples with closest distance to given target based on filters and calculator type

Similar idea should apply when calculating Single

The engine / program would also be used when searching for haplogroups considering the autosomal data

Planned UML diagrams for Java code

UML of packages



UML of back end

