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 Menu window

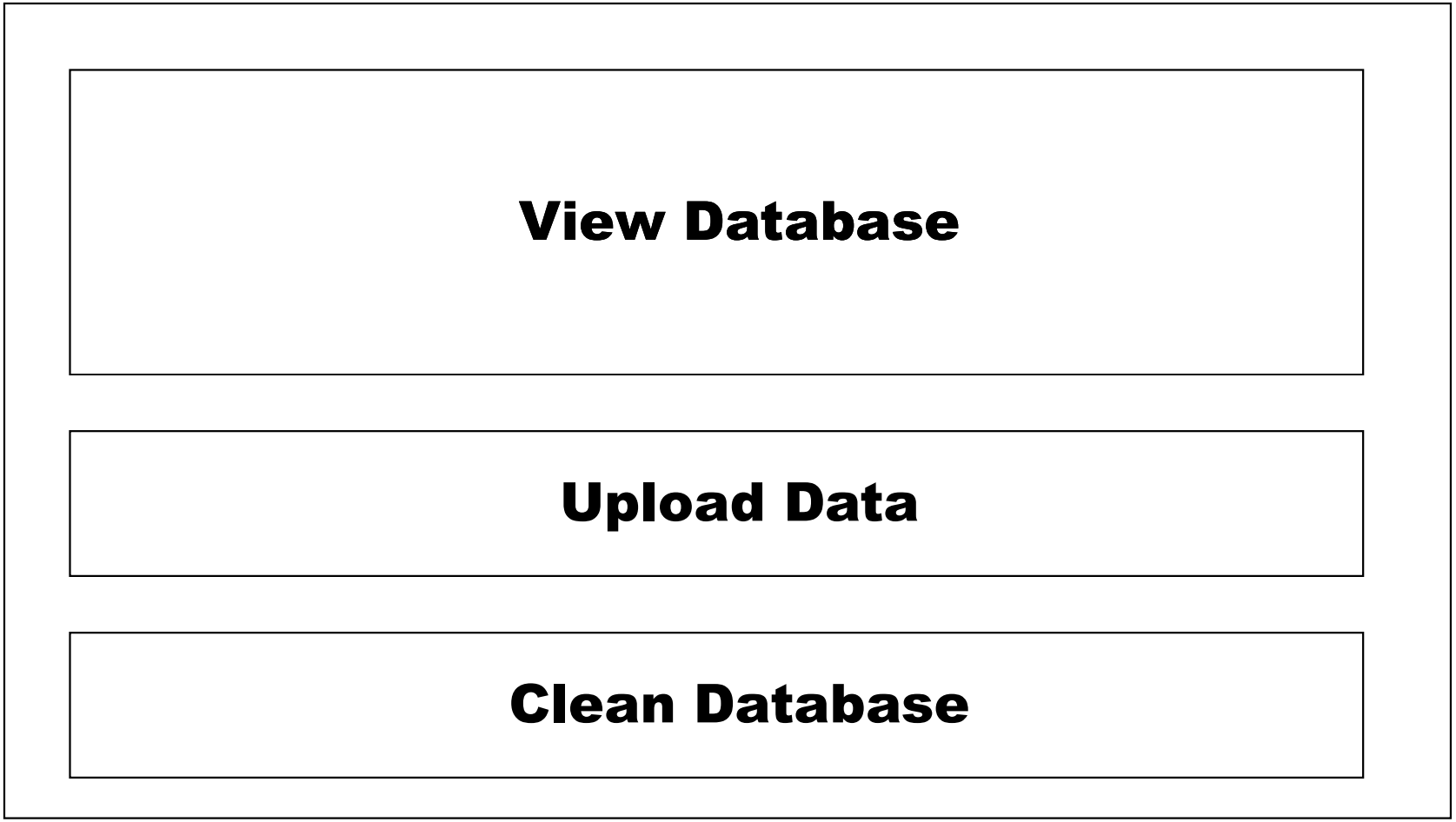
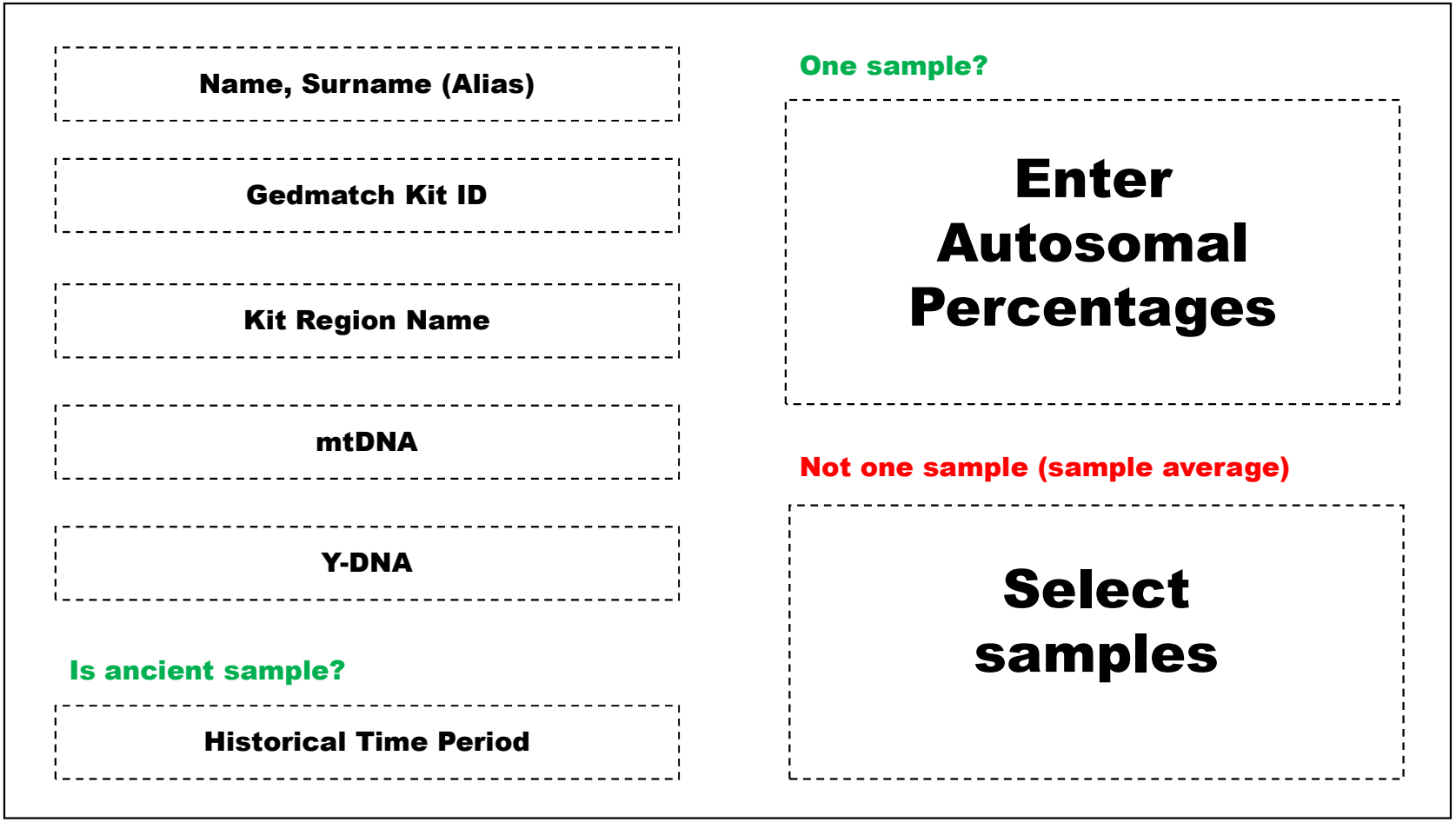


Table of Database Contents

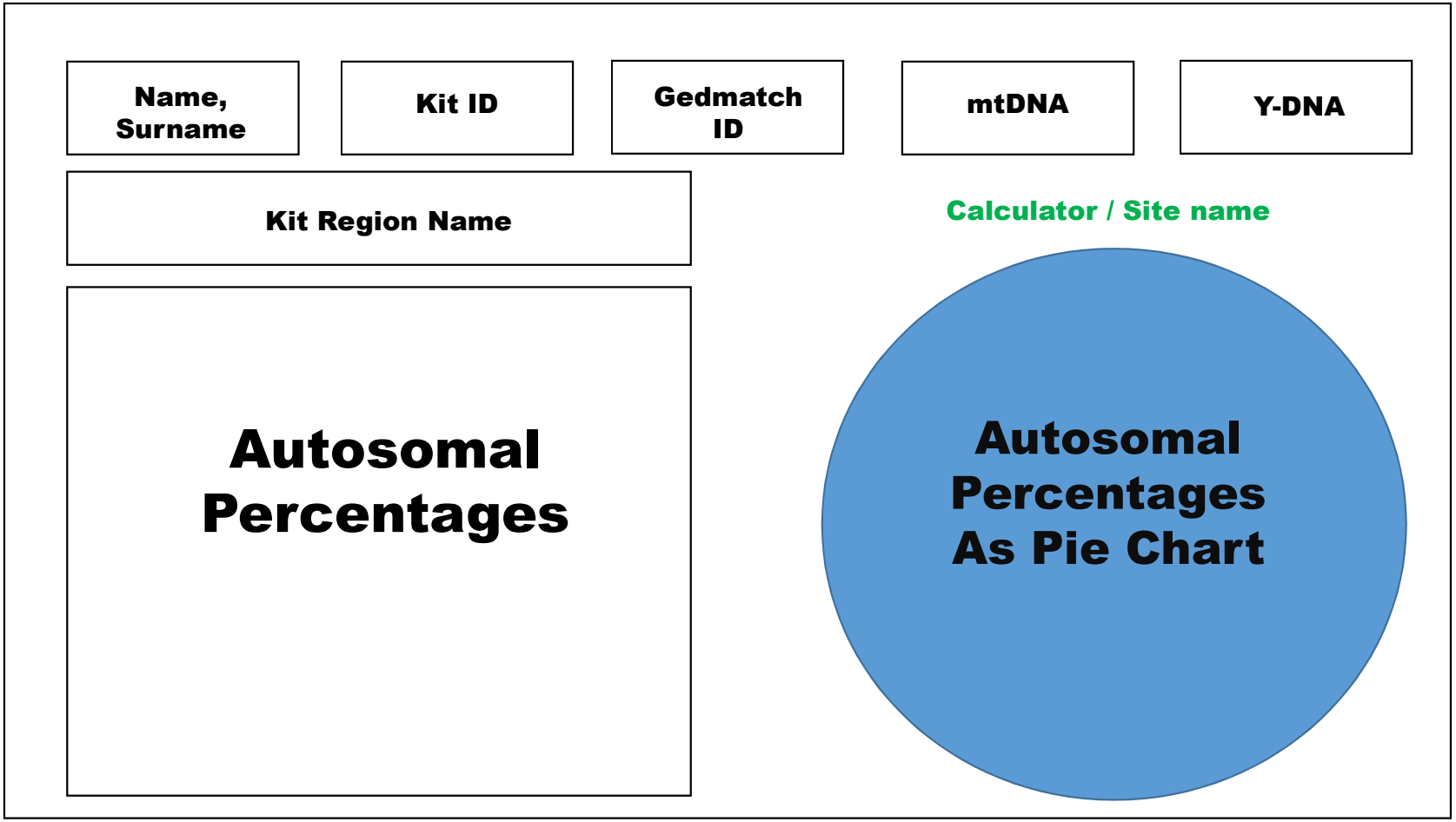
Database Window

Each row is clickable / expandable

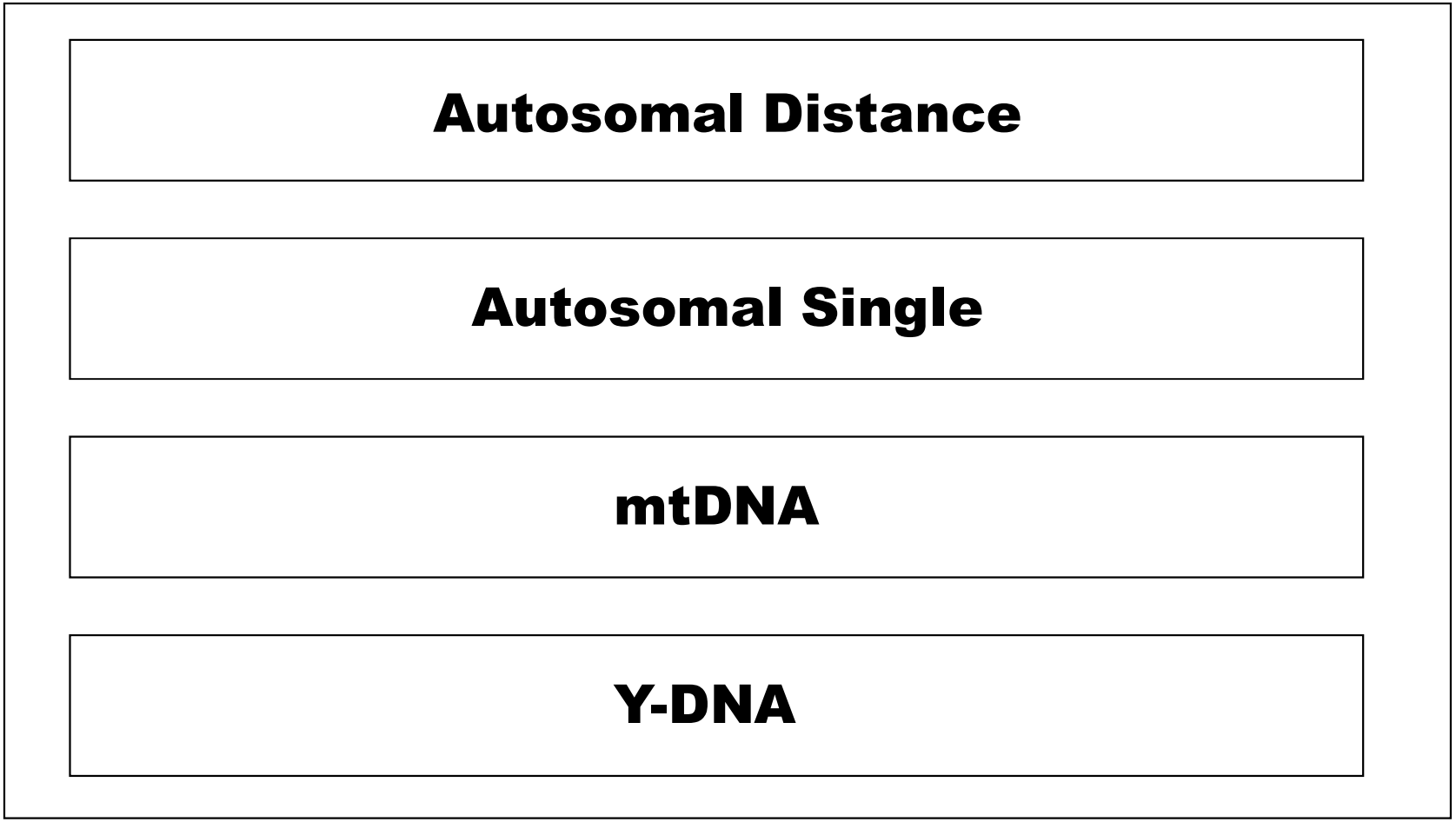
Database Add Window



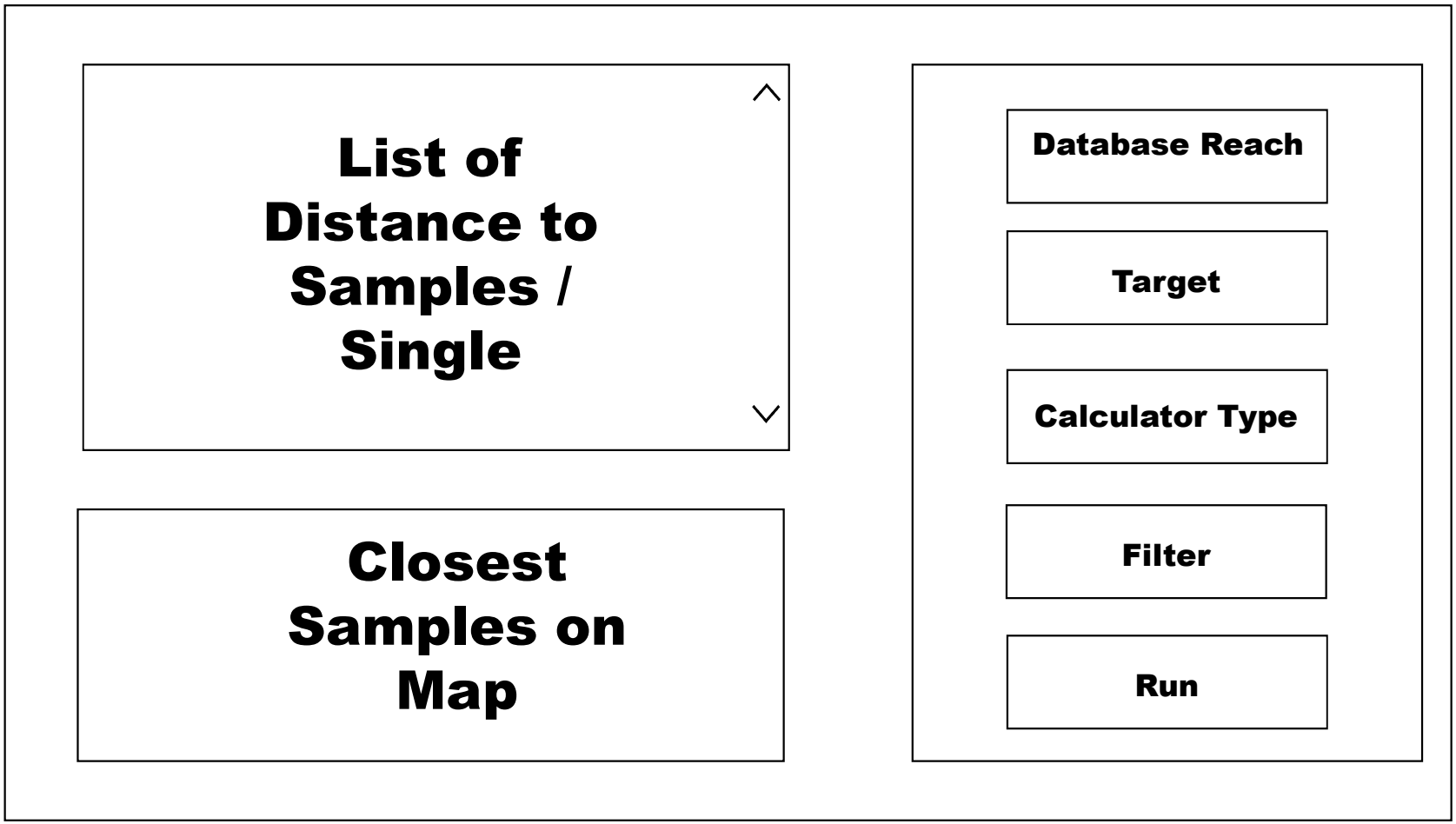
Sample Window



Ancestry Window



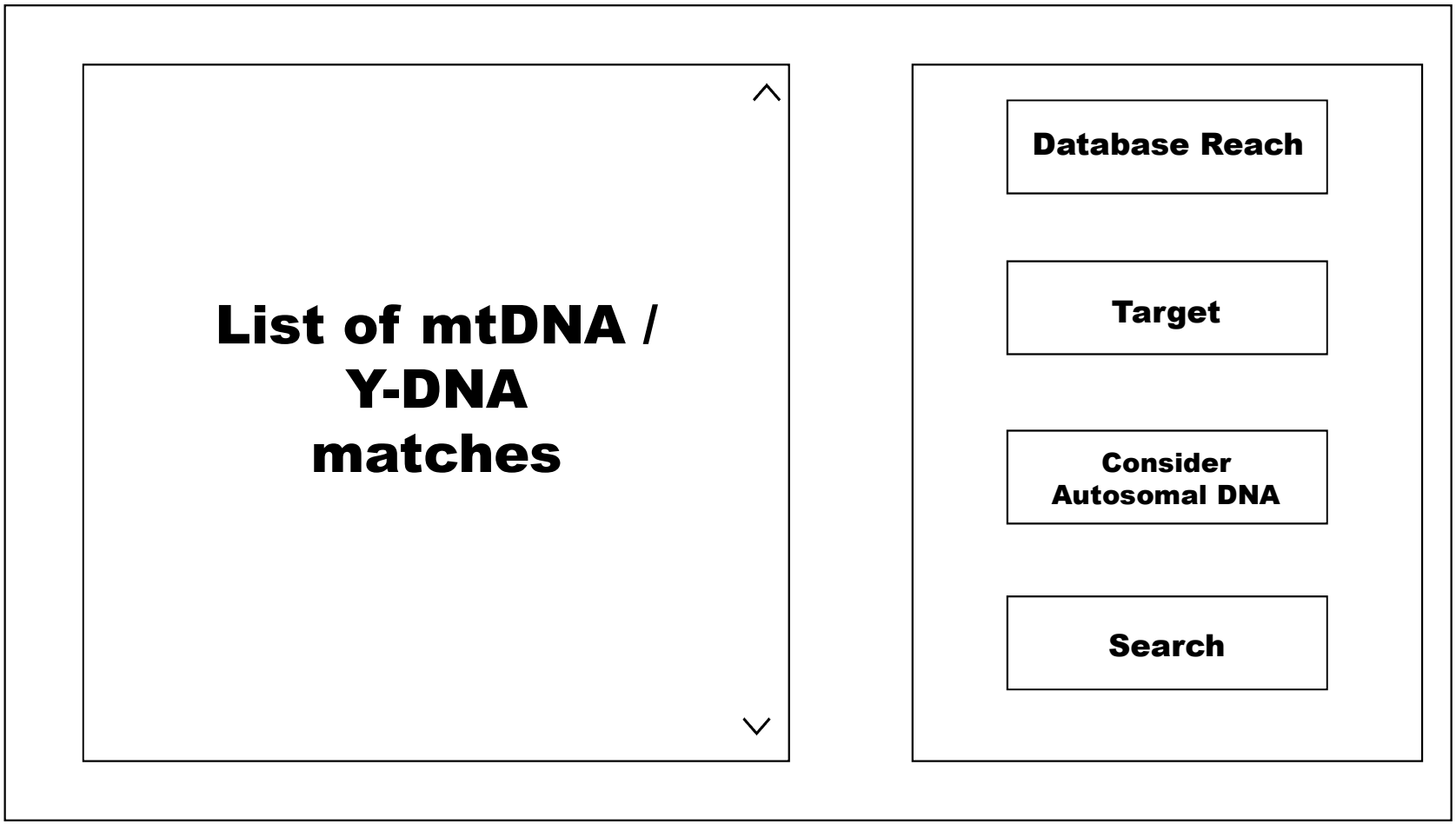
Autosomal Distance and Autosomal Single Windows



Location / Region of Matching Samples highlighted on the map

Map Window (as a Popup)

mtDNA and Y-DNA Windows



About Engine / Program

The engine /program will be called by Ancestry section mainly

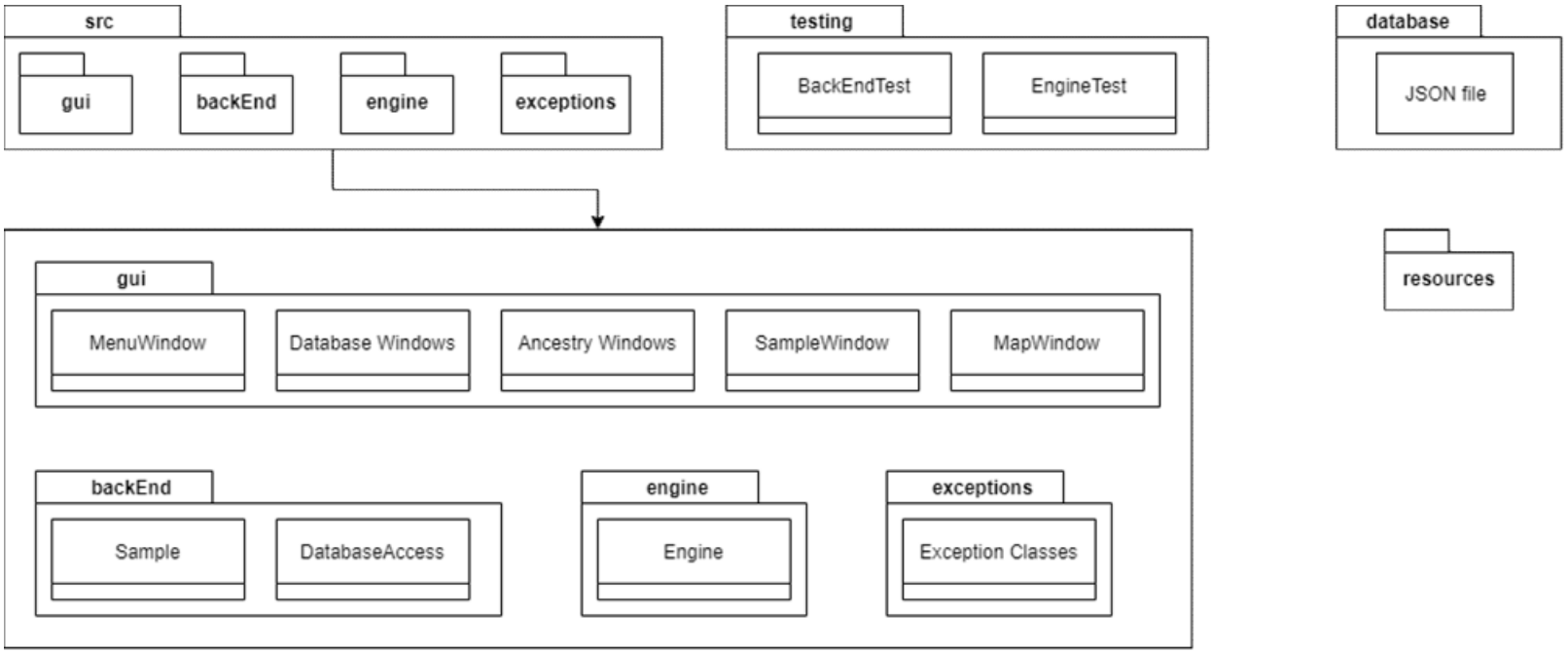
It should be able to provide a list of samples with closest distance to given target based on filters and calculator type

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