

Maps for data structure:

first names: $\langle \text{fname}, A = \{ \text{id1}, \text{id2}, \dots \} \rangle$

last names: $\langle \text{Lnames}, B = \{ \text{id1}, \text{id2}, \dots \} \rangle$

years: $\langle \text{year}, C = \{ \text{id1}, \text{id2}, \dots \} \rangle$

codes:

1111 – win, 2222 – death, 3333 – born

prizes: $\langle \text{prize}, D = \{ \text{id1}, \text{id2}, \dots \} \rangle$

location: $\langle \text{abcdlocation}, E = \{ \text{id1}, \text{id2}, \dots \} \rangle$

codes:

abcd – born

defg – death

hijk – current

final map:

$\langle \text{id}, \text{class} \rangle$

All queries take one – All sets from map key values, then intersects them.

$A \wedge B \wedge C \wedge D \wedge E = \text{Final Set}$

Or else, the default search parameter is all keys from the final map.