

Main Logic (processFreq) state machine diagram:

current frequency : f

expected frequency : a

error allowance rate : ϵ

error range : $[2^{-\frac{\epsilon}{12}} a, 2^{\frac{\epsilon}{12}} a]$

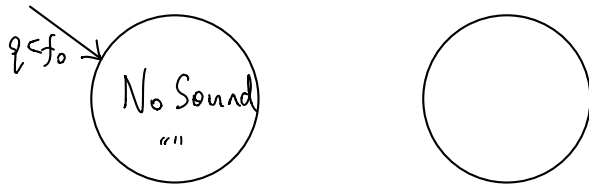
least stable time : st

detect sound threshold : f_0

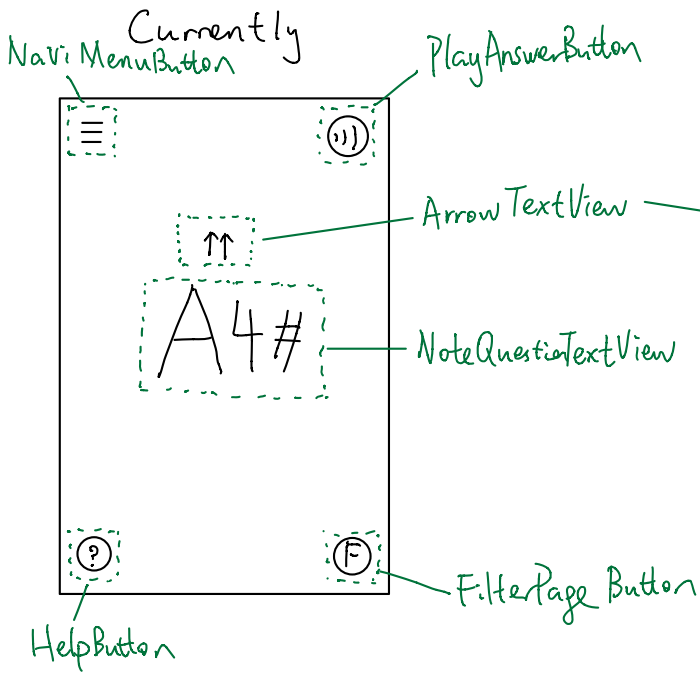
error warning factor : C

second error range : $C * \text{error range}$

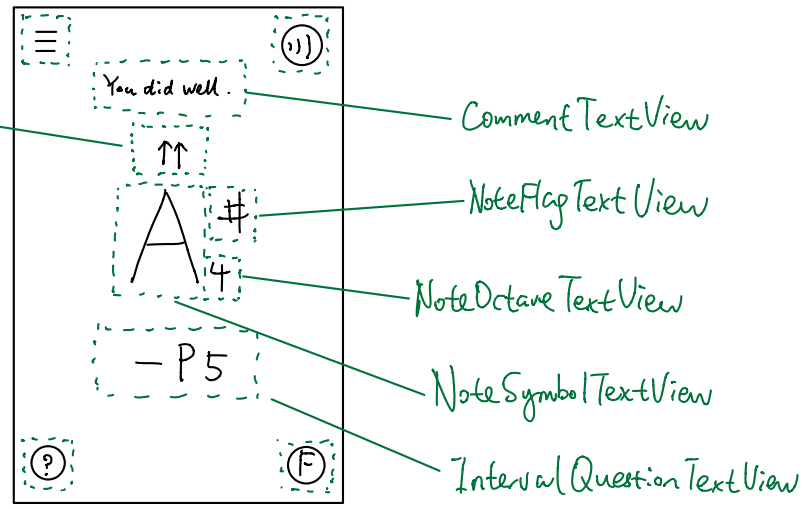
TOPD



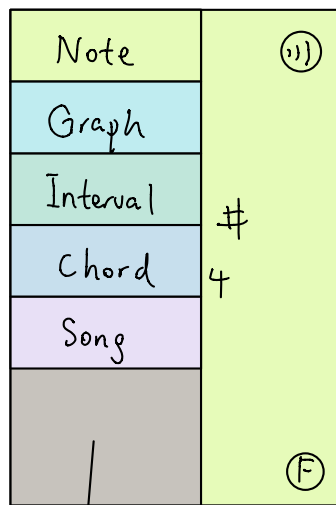
General Main Screen



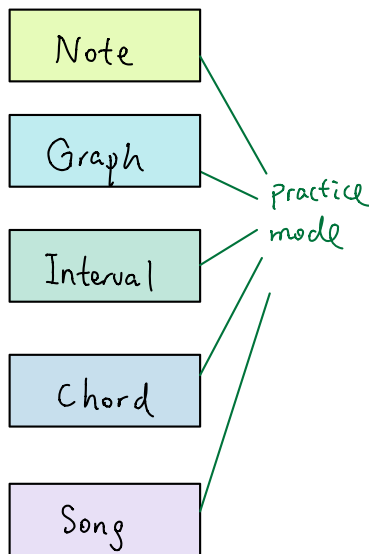
Ideally



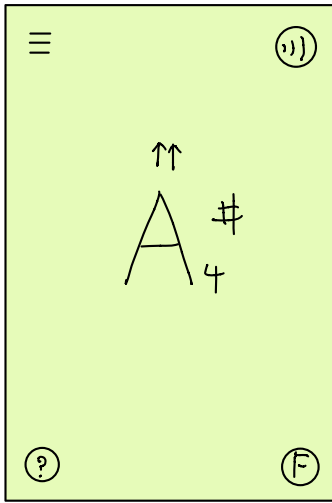
Navi Menu



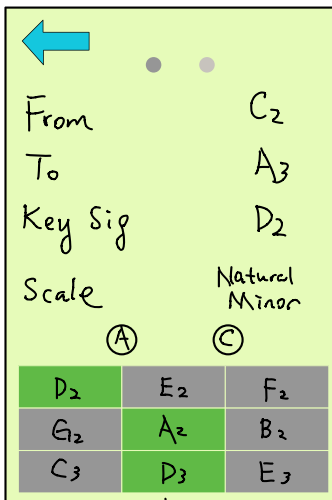
Summary
(global) setting
More



Note Practice Mode

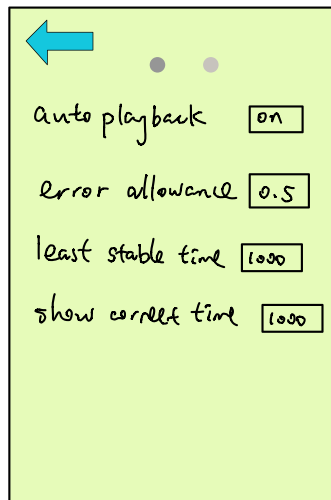


Note Mode Setting Page (tab 1)

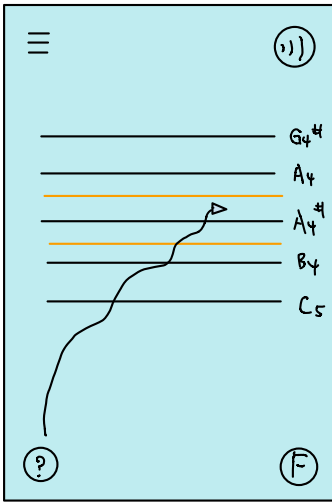


urgent colour

(tab 2)

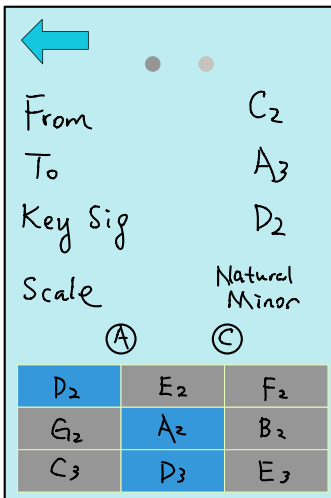


Graph Practice Mode

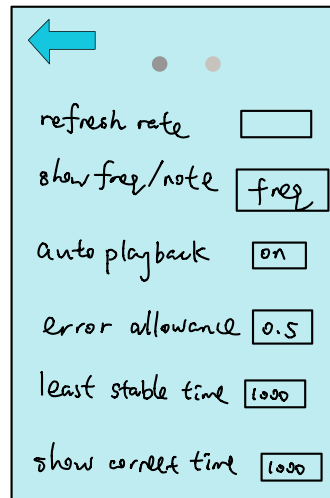


Graph Mode Setting Page

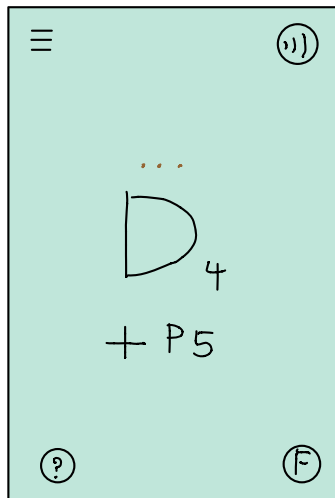
(tab 1)



(tab 2)



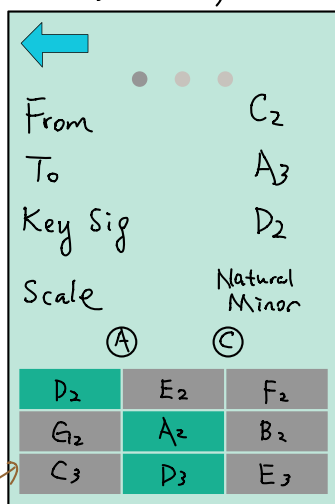
Interval Practice Mode



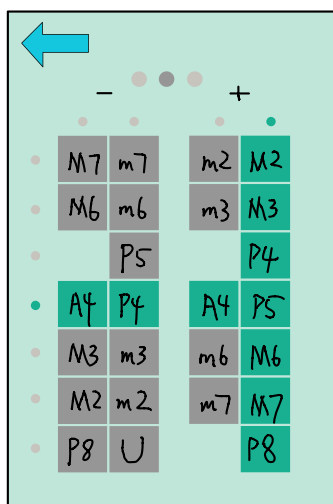
- single tap:
play D₄
- long press:
play D₄, A₄, {D₄, A₄}

Interval Mode Setting Page

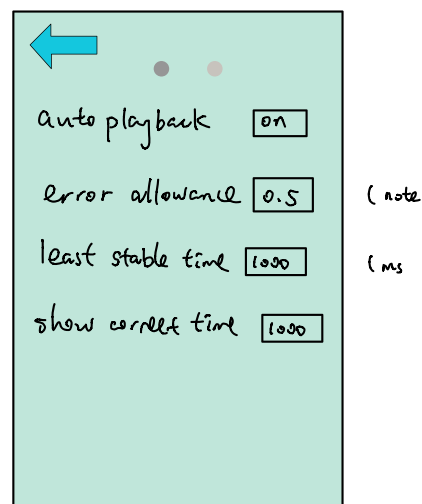
(tab 1)



(tab 2)

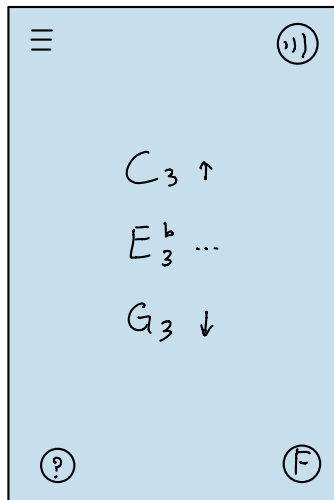


(tab 3)



note p₅₀ (generated by the filters above)
(candidate notes)

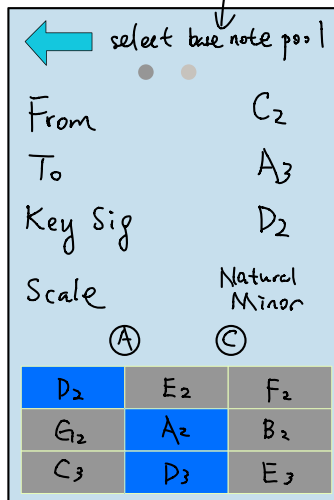
Triad Practice Mode



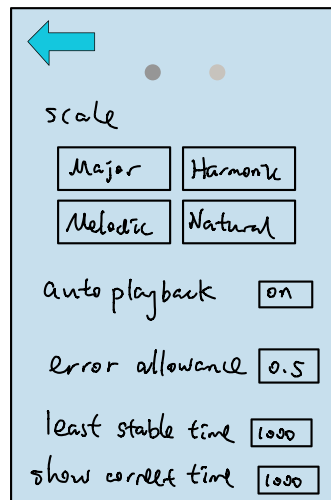
- ⏮
- single tap:
play chord
- long press:
play
 $C_3, E_3^b, G_3, \{C_3 E_3^b G_3\}$

Triad Mode Settings Page

(tab 1) key signature



(tab 2)

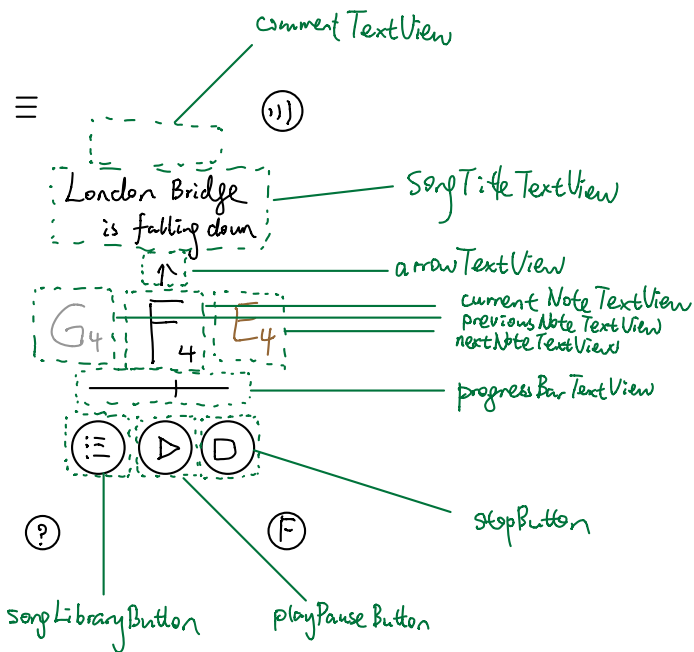
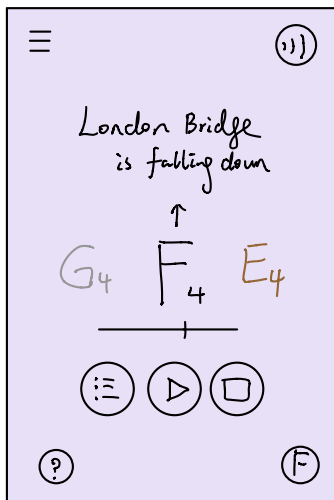
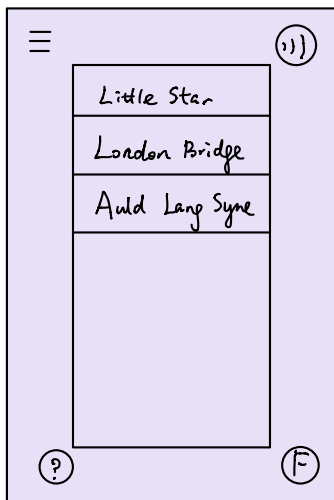


in this case

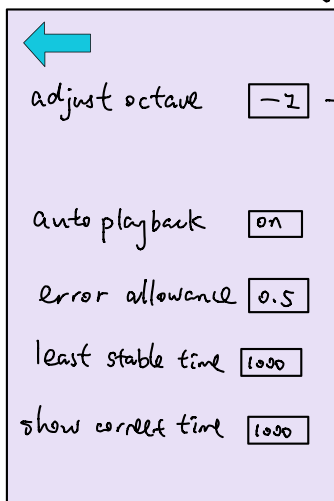
key signature pool will be

$\{D_2, A_2, D_3\}$

Song Practice Mode

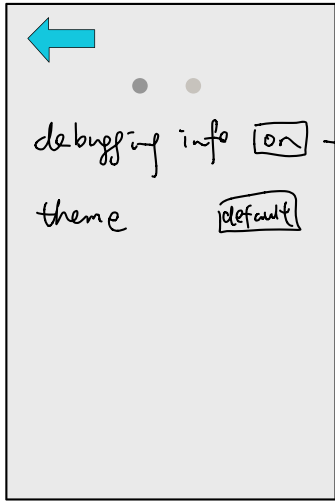


Song Mode Setting Page



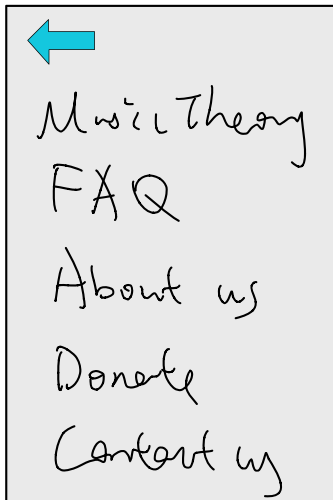
$\left\{ \begin{array}{l} -2 \\ -1 \\ 0 \\ 1 \\ 2 \end{array} \right.$

Global Setting Page



show current frequency & current Pitch

More Page



Summary Page



- Graph ?
- Top 10 notes mastered :
- Need to practice notes :