

# Mental Math

goal Permit the user to play mental math game and having incentive to make progress.  
Down the line, the app should allow a fun competition mode playing against another player "live"

why learning and deepening programming concepts  
"learning by doing"  
Motivate myself and other to play math games.

stakeholders Etienne : committer  
goal : develop an app and have fun doing it

The players : users of the app  
goal : play and be better at mental math

## Requirements

1. Should be playable on any device connected to internet
2. Players should be able to save their progress
3. The game should be fun and have incentives to play more
4. Players should be able to share the game with other friends

## Requirements (continued)

5. The game should have different levels based on player XP
6. The player should be able to log in through different manners
7. The game should be free
8. The game should be suitable for users of all ages as long as they can read and count
9. The game should be in English. Other languages possible in later phases.

## Application Architecture:

- There must be a database to keep user profiles with their progress
- there must be an interactive page to display app and receive data from user

# Mockups

(later phases)

## MENTAL MATH

log in  
play as guest  
info

## DASHBOARD

My ship

⇒ Level 1 **START**  
Level 2 (locked)  
Level 3 (locked)  
Level 4 (locked)  
⋮

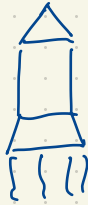
## LEVEL 1

$$7 \times 4$$

$$28 - 12$$

$$4 + 7$$

$$52 \div 3$$



## My ship



- XP
- Bonus
- multiplier
- 
- 
-

Mockups

initial phase

MENTAL MATH

START

LEVEL 1

$$4 + 13$$

Time left  
12.3 s



Points : 87

Points left to Level 2: 13

LEVEL 1

TIME OUT!

SCORE : 118 pts

Level 2

LEVEL 1

GAME OVER

## Rules:

### Phase 1.

- each correct answer gives  $x$  points (and  $y$  seconds?)
- the player needs to reach  $w$  points to go to level + 1

ex

start : 20 sec

each correct answer gives 10 pts

to reach lvl 2 : 100 pts