DAILY CHALLENGE HUB

An Interactive Hub for Student Engagement

WHAT PROBLEM DO WE SOLVE?

- Students lack motivation outside of classes.
- Unused potential of grids in the corridor

SOLUTION

Daily Challenge Hub = Interactive board/monitor with daily challenges
- Every day students will see new challenge of the day.
- Try to solve it if you are brave enough

GAMIFICATION

Why students will love it

- Mini-ranking: top-5 weekly/monthly solvers.
- *Thematic days: math, logic, algorithms.
- *Push notifications: get the challenge on your phone.

- * - ideas that might be added

TECHNICAL IMPLEMENTATION

☀ HARDWARE: MONITOR
+ MINI-PC*
(RASPBERRY PI)

SOFTWARE: PYTHON/
SMALL WEB SERVER.

💬 INTERACTION: QR
CODE → WEB PAGE FOR
SOLVING
TASKS/MONITOR YOUR
RATING.

IMPLEMENTATION STEPS

- Concept (done).
- Prototype: UI mockup + wiring scheme.
- Online demo: short video/animation.
- Campus testing.

THANK YOU FOR YOUR ATTENTION!

задача

список решивших

топы за месяц. или за всё время

Database

- db_name: str

+ query(sql, params, fetchone, fetchall)

uses

uses

uses

TaskModel

- db: Database

+ get_today_task()

SolversModel

- db: Database

+ get_solvers_for_today()

LeaderboardModel

- db: Database

+ get_top_solvers(limit)

aggregation

aggregation

aggregation

AppController

- tasks: TaskModel

- solvers: SolversModel

- leaderboard: LeaderboardModel

+ get_today_task()

+ get_solvers_today()

+ get_leaderboard()

uses

main

- db: Database

- controller: AppController

- root: Tk

- app: AppUI

+ запускает цикл mainloop()

uses

AppUI

- root: Tk

- controller: AppController

+ update_ui()