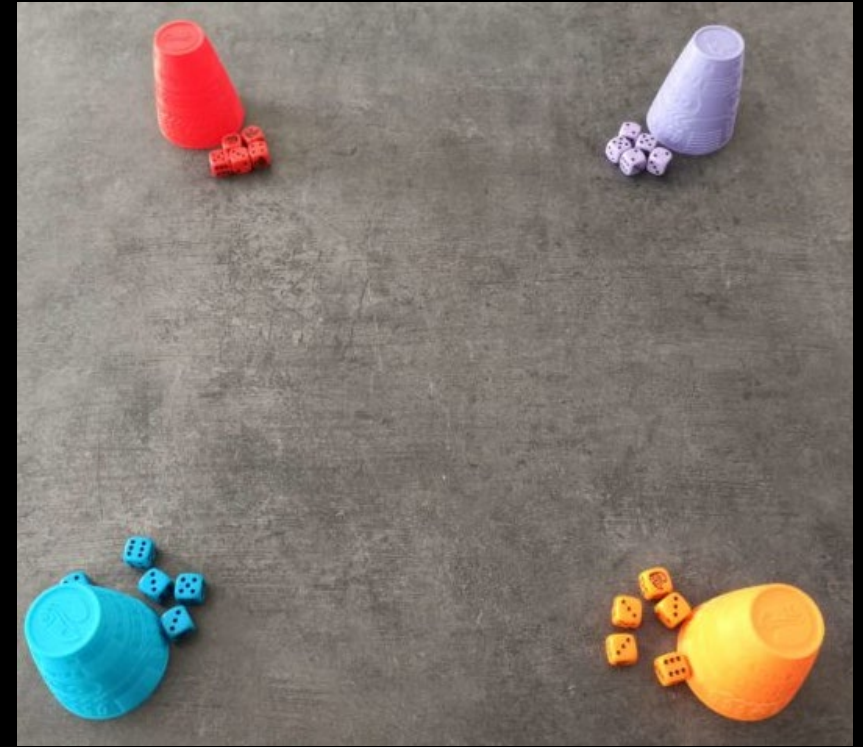# SO Project2:
"Perudo Game w/ Threads!"
Due: 12/1/2022

Project: Perudo

- You will develop the Perudo game [REF], where:
  - The game is played by a user through an ASCII UI
  - The computer player(s) will be threads

- The UI is up to you, but it should **be intuitive**
- The computer player AI is also up to you
- pthreads to be used for the implementation!

Example Play

$ Choose one option:
1) Start a new game
2) Make a guess
3) End game
__1

$How many players (2-6)?
__3

33P56|XXXXX|YYYYY|

$ Choose one option:
1) Start a new game
2) Make a guess
3) End game
__2

Enter your bid (7 for Dudo, 8 for Calza):
3 4

pthreads in Perudo

- Create a thread for:
  - Dealer: Manages the display, decides the end of the game
  - Each computer player:
    - To be chosen among (at least) 2 intelligence levels:
      - Random: not smart
      - AI: counting the dices remaining and checking the probability
      - …
  - User: User player interaction
    - Get user input, input check, …

(Bonus: %30)

- Dynamically add/remove computer players

- The user can ask it during the game
  - When it is his/her turn

Design Details

- Almost none!

- You have the freedom on many things:
  - the way threads communicate
  - the user interaction
  - the display
  - ….

- The game play should be:
  - informative (user should be able to follow what's going on)
  - easy
  - clean (no zombie threads, etc.)

Deliverables

- Provide the code
  - The code should not pass 1000 LoC
  - Use self-explanatory function/variable names
  - Provide comments for each function/variable and important statements

- Provide a set of slides to explain to your "jefe" the program design and how it is used
  - The design should explain the threads and the tasks assigned to them
  - Include a set of sample outputs

Conclusions

- Add a conclusion section in the slides to summarize your overall experience
  - For example:
    - For which topics and how, this project helped you
    - Where did you have difficulties?
    - …