- **Sprint summary**

  In this sprint, we have added new features besides refactoring and reviewing the old ones.

  Regarding Backend, we have implemented:

    - **add tournament manager**
      - adding the function '`update_state`' which updates the state of players after playing a tournament game.
    - **Adding Tournament model**
      - Only user players can deal with it, not the guest ones.
    - **modify player model**
      - add '`report_game`' method to update player states after playing a game.

  Regarding Frontend, we have implemented:

    - tournament page.
    - add tournament button to gamespace page.
    - add trivia game button to gamespace page.
    - add trivia game GUI by pyqt.
    - add guest mode.
    - add the "change password" feature in the user profile, Gui.

- **Requirements**
  - Functional
    - User is able to:
      - view new game (Trivia)
      - start tournament
      - change password
      - play as guest

- Trivia game support two modes:
  - one player
  - two players
- XP earned from a game is relative to player's score
- The game should be able to modify in player states as a number of wins, xp, achievements.
- Getting a random quote on the landing page

- ○ Non-functional
  - landing page loads within 3~5 seconds
  - fetching from database happens in a reasonable time (~ms)
  - game Gui is easy to figure out within 2~3 minutes
  - optimize communication with database
  - Also in the game try to reduce communication on database and on the internet.

- **Use case diagrams**
  - profile use case <u>link</u>
  - Gamespace use case <u>link</u>
  - Tournament use case <u>link</u>

- **Sequence diagrams**
  - play game <u>link</u>
  - gamespace flow for player <u>link</u>
  - tournament <u>link</u>
  - profile <u>link</u>
  - gamespace flow for guest player <u>link</u>

- **Testing**
  - add testing of the tournament.

- **Changes In design**
  - When a user enters the tournament he is asked to choose 4 players to play in the tournament and to choose which game he wishes to play the tournament in. Then he will be directed to the game page.

  - The game is played by 2 players at a time. The one who wins will be able to get to the next stage. Finally, the winner will be the first in order of the player's table.

- **Changes In code**
  - We added game Trivia to our gamespace.
  - The Trivia game supports 2 modes: 1 player, 2 players.
  - The one-player mode means the user or guest can play alone and answer 10 questions. His score will be 10 per question.
  - In 2 player mode it means 2 are playing on the same computer so questions will be alternating between them they are also 10 questions but 5 for player 1 and 5 for player 2.
  - The player who gets a higher score will be the winner.

- if the player was in user mode while playing his XP, and number of wins can be updated only in 1 player mode.
- if the player was in guest mode while playing he has also XP during the session he opens in . so his XP can be updated in only the 1 player mode.
- In the game to decrease communication with the api so at the beginning 50 questions are loaded from the website then every time inside the game we get a random question from them. We don't deal with the website every question.
- We added the tournament feature to our application but it is only allowed to user mode, not guest mode.
- The tournament feature needed making 2 Gui pages, one at the beginning to choose game and type players and the other Gui to show the winner at the end and the order of players after the tournament.
- If 2 players in a tournament had a tie they would play again till one wins.
- In a tournament, the players' states are updated after playing a match, and the next time we choose the 2 players with the minimum state to play the next match.
- We added the feature of appearing random quotes from the database each time on the landing page.
- We added the ability of the user to change the password when he enters his user profile information.
- The password is checked the same as if he signs up -> password should be > 8 to be a strong one.

- Current schema

User_info

name	password	salt	gender	avatar	level	xp	weekly_xp	wins	games	daily_ch

Quotes

Id	quote

game_achievements

id	description	type	goal

player_achievements

player_name	achievement_id	checked

- Jira link