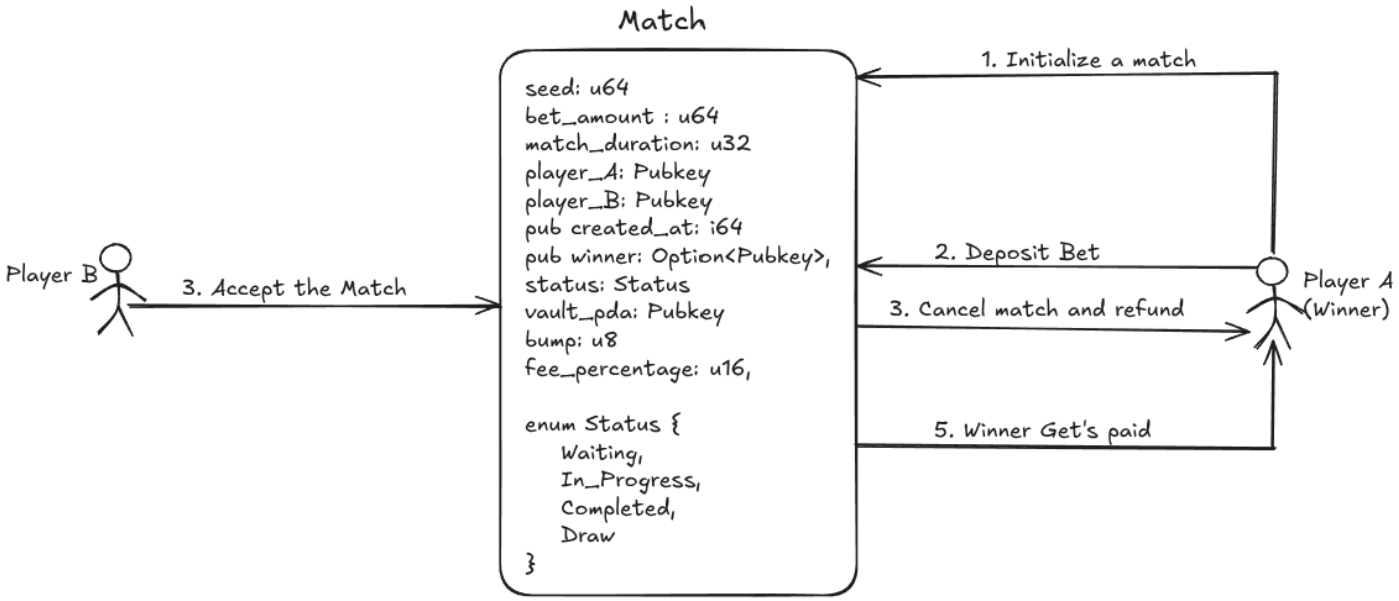
Assignment: Architecture Diagrams

On-Chain Chess Game with betting

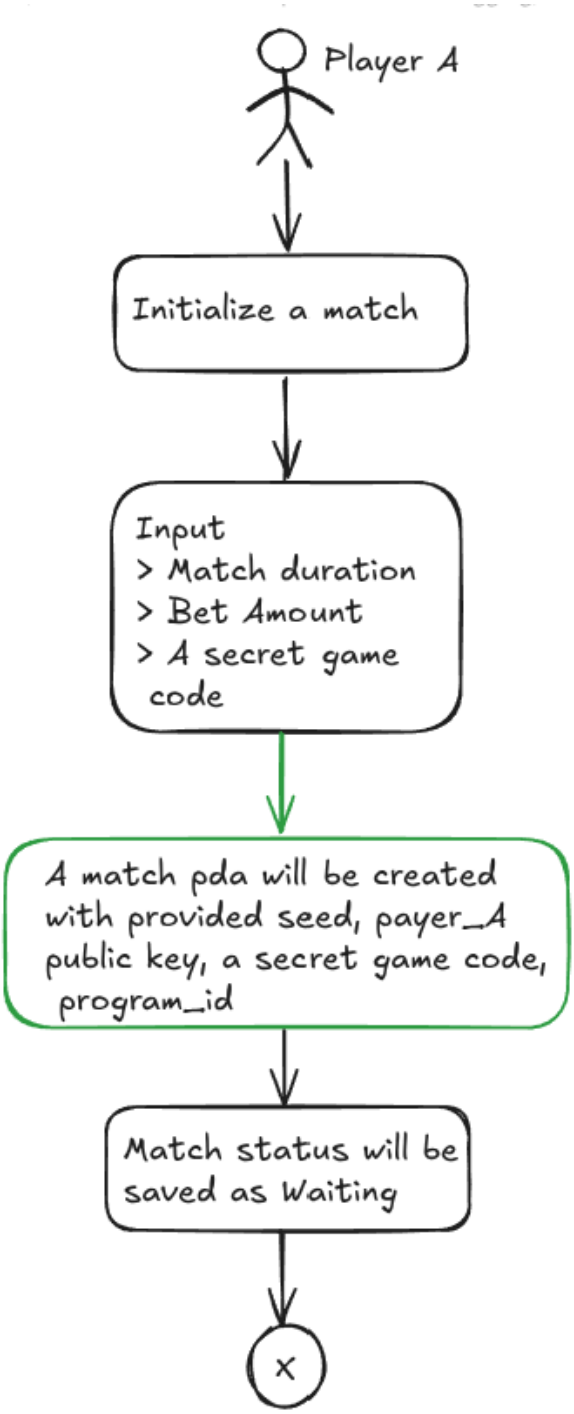
Protocol POC Requirements

- The protocol should create a match pda to store all match details.
- The protocol should create a vault ATA within the match to store players' bets.
- The protocol should allow a player to deposit a bet in the vault.
- The protocol should cancel a match when requested.
- The protocol should allow the opponent player to place the bet and join the match.
- The protocol should update the match result after match completion and save the winner.
- The protocol should pay the winner after calculating the winning amount.
- The protocol should resolve payouts if the match is a draw.

Overview

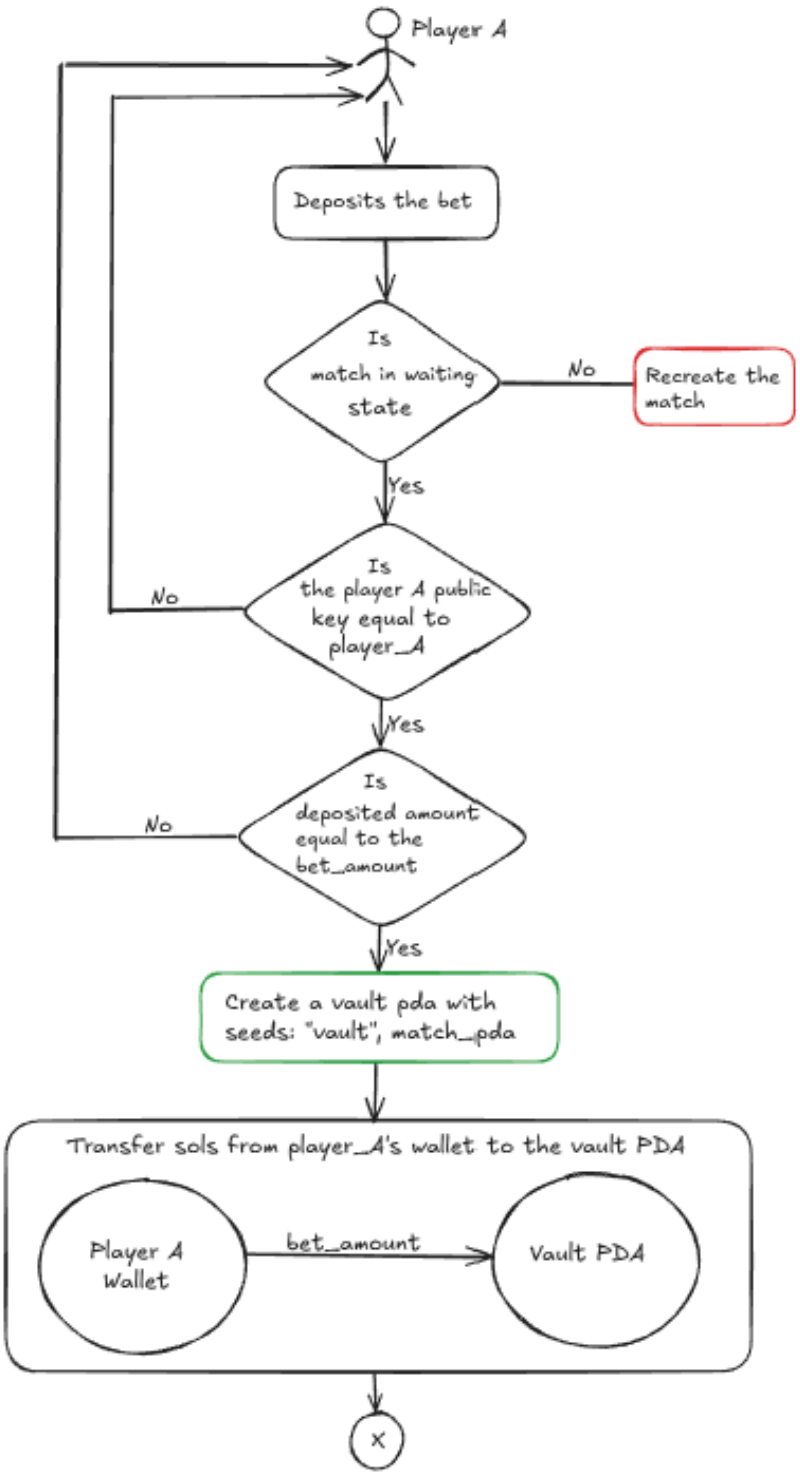


Initialize a Match



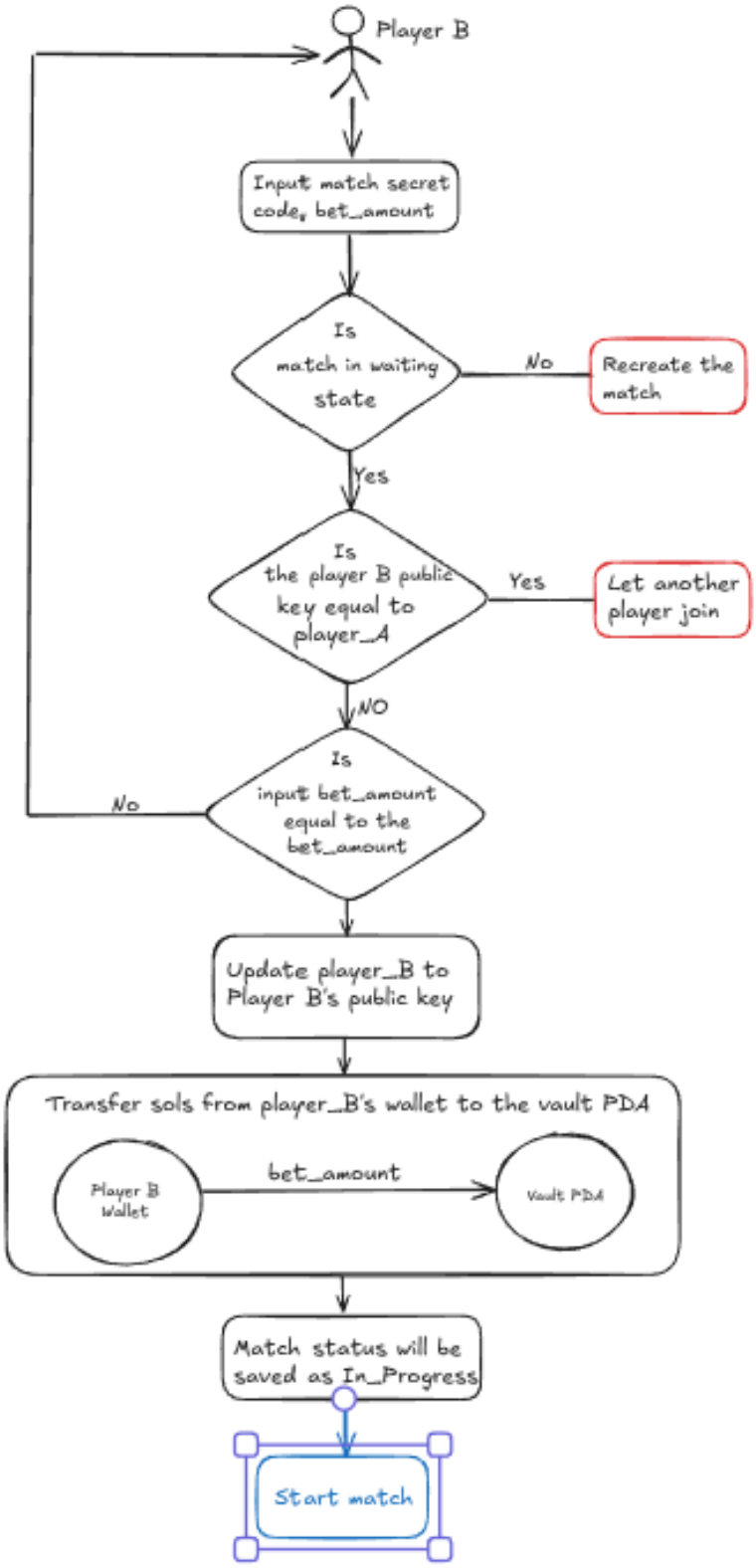
- The player will select the match duration and bet amount.
- A match PDA will be created with seeds: “match”, user’s public key, a secret code entered by the user, program_id
- A match will be initiated with state waiting.

Deposit a bet

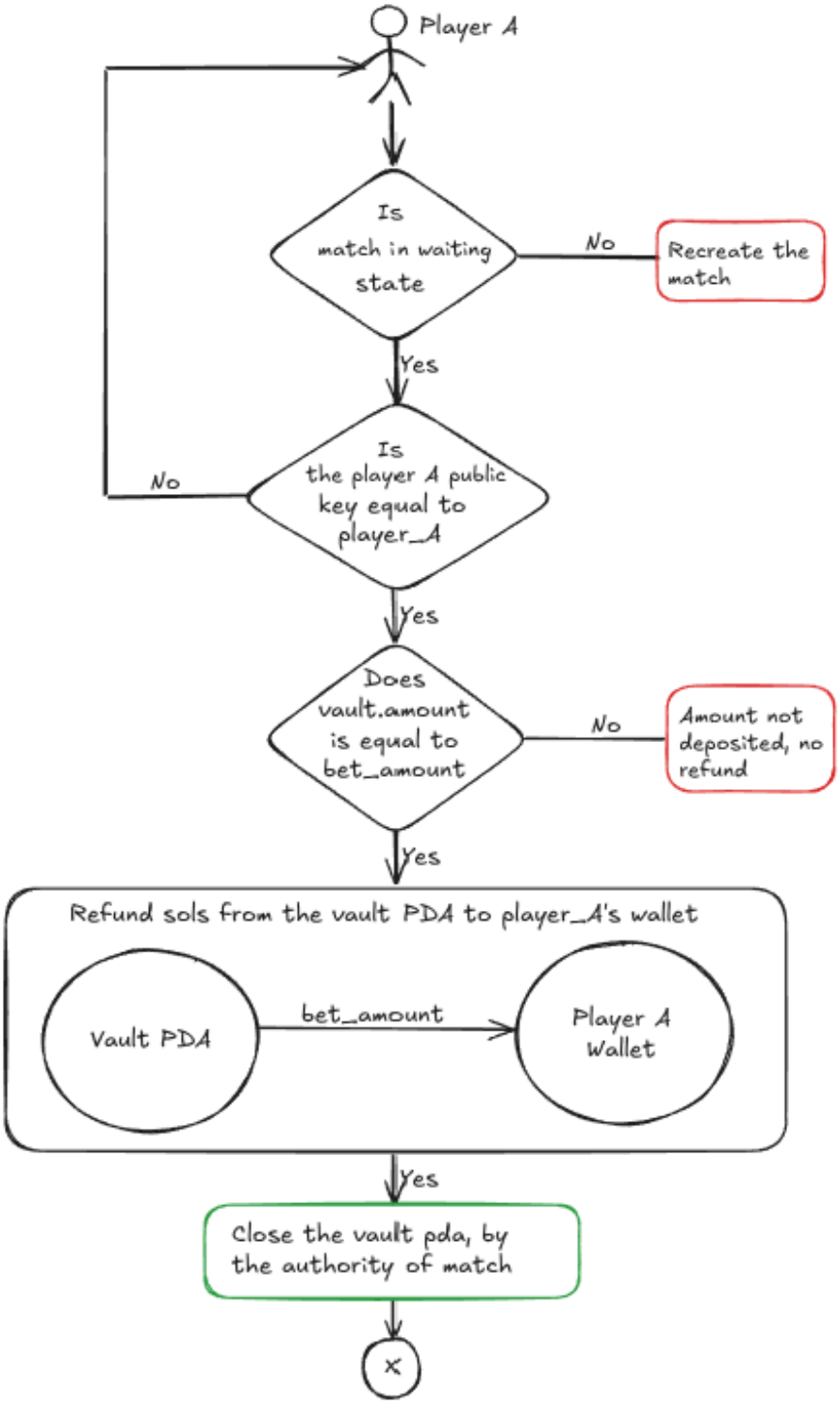


A vault PDA is created with seeds: “vault” and match_pda.
Transfer: From player_A’s public key to vault PDA

Accept a match



Cancel Match and Refund



Close Account: By using close account function passing vault pda and authority as match

Final Payouts