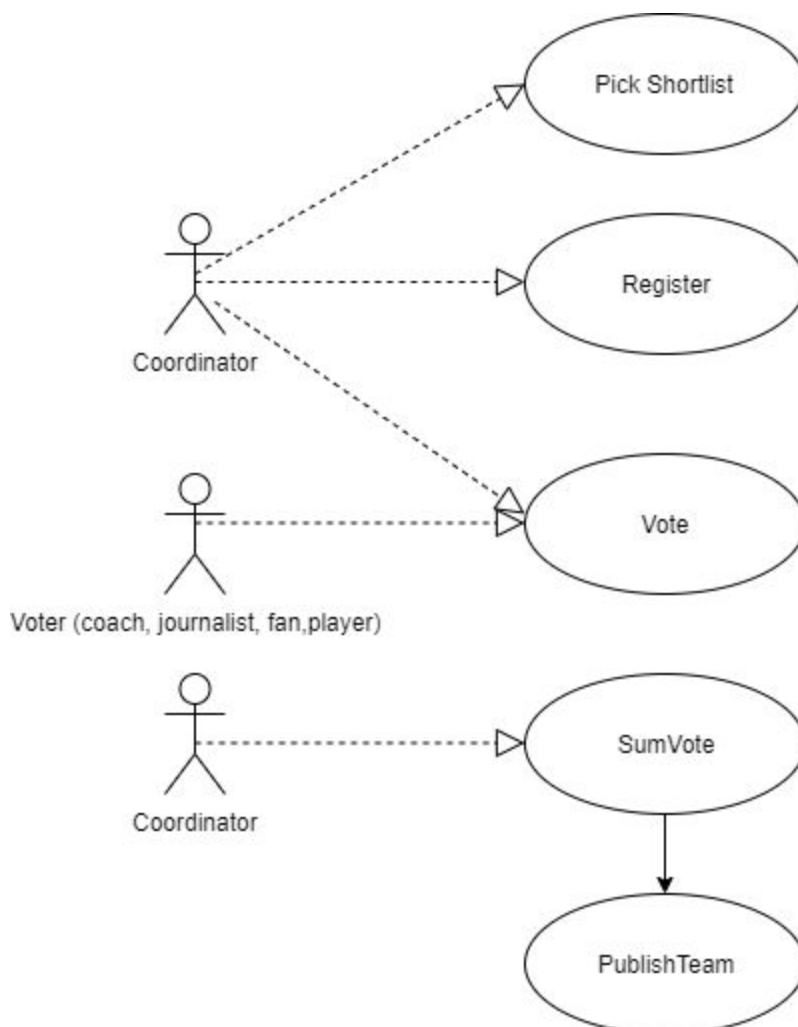


FIFA Players Of The Year

The idea is for the voters to pick the 4 best soccer players across the world in a given year (1 goalkeeper, 1 defenders, 1 midfielder and 1 forwards). A coordinator registers the voters. The coordinator creates a shortlist of players that are considered the nominees. The shortlist consists of 3 goalkeepers, 3 defenders, 3 midfielders and 3 forwards (pre-determined in this example). There are 4 different categories of voters which include coaches, players, journalists and fans. Each category has a different weight that contributes to the results: 4 points for coaches, 3 points for journalists, 2 points for players and 1 point for fans. Each voter votes for the best player for each of the goalkeeper, defender, midfielder and forward positions. The points each nominee collects are added together and the players with the highest points total from each of the 4 different positions are selected (1 goalkeeper, 1 defender, 1 midfielder, 1 forward).

Use Case Diagram



Remix Interface:

FIFA - browser/FIFA.sol

Deploy

4,4,4,4


▼



or

At Address

Load contract from Address

Transactions recorded: 1 ▼

Deployed Contracts 

▼ FIFA at 0xD04...f71f0 (memory)  

changeState

uint8 x

▼

pickShortlist

register

uint8 category, address voter

▼

vote

uint8 gk, uint8 def, uint8 mid, uint8 fwd

▼

reqWinner

state

voterCount

Positive Test Plan:

- 1) Deploy (4,4,4,4)
- 2) Register 8 voters (2 coaches, 2 journalists, 2 players, 2 fans) using this input ({0,1,2,3},address). Make sure you are the coordinator each time you register someone.
- 3) Change state to 2
- 4) PickShortlist
- 5) Vote using this input example (1,1,1,2) 8 times. Choices are between 1-3 for each entry.
- 6) Click VoterCount and you will get 8
- 7) Change State to 4
- 8) Click Req Winner and you will get the following



Negative Test Plan:

- 1) Deploy (2,2,2,2) . It will fail because the minimum is (4,4,4,4)
- 2) Try to register while not being the coordinator. Transaction won't go through
- 3) Try to vote, change state, etc when not in the valid allowed state and the transaction won't go through,

Contract Diagram

FIFA
<pre>struct Voter{} struct Nominee{} enum Phase {Init, Regs, Shortlist, Vote, Done} address coordinator mapping(address => Voter) voters;</pre>
<pre>modifier validPhase(Phase reqPhase) { require(state == reqPhase); _; } modifier onlyCoordinator() {require(msg.sender == coordinator); _; } modifier onlyPanelMember() {require(msg.sender == panelMember); _; }</pre>
<pre>constructor (uint8 gk,uint8 def,uint8 mid,uint8 fwd) public function register(uint8 category,address voter) public validPhase(Phase.Reg) onlyCoordinator function vote(uint8 gk,uint8 def,uint8 mid,uint8 fwd) public validPhase(Phase.Vote) function reqWinner() public validPhase(Phase.Done) view returns (uint8 winningGK,uint8 winningDef,uint8 winningMid,uint8 winningFwd) function pickShortlist()public validPhase(Phase.Shortlist)</pre>

Architecture Diagram

