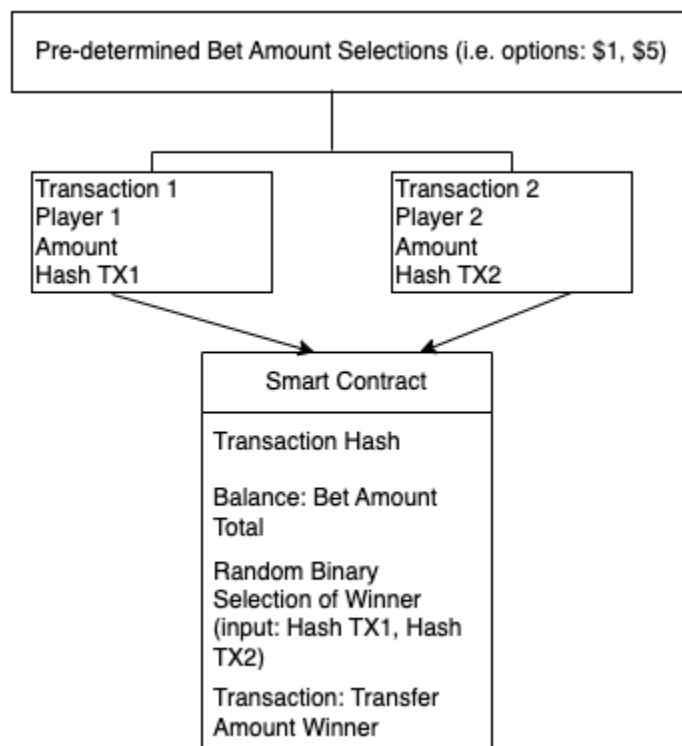


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Members: Tung Tran, Yulianna Izaguirre

**Game Application:** Two bets of the same amount from a set of predetermined amounts (to prevent odd bet amounts from being unfulfilled for too long, as two players have to make bets of the same amount) are made by two players to trigger the smart contract. Smart contracts will verify transaction information and select a winner utilizing a binary system. One winner is randomly selected based on the transaction hashes from the players making calls to the smart contract. Once the smart contract determines the winner the amounts bet are transferred to the winner.

**System diagram:**



**Pseudocode for application:**

```
contract Bet {  
  
    Bet(transaction1, transaction2) {  
        Amount = transaction1.amount + transaction2.amount;  
    }  
  
    outcome = bool PickWinner(transaction1.hash, transaction2.hash);  
    if (outcome) {  
        transaction(Bet, transaction1.sender, Amount);  
    }  
}
```

```
    } else {  
        transaction(Bet, transaction2.sender, Amount);  
    }  
}
```

**Blockchain Motivation:**

Data immutability ensures secure money transfers and credibility of outcomes/player wins is independent from any central authority figure (house?). Players or prospective players can audit the odds of winning which is public to the players via the executed smart contract on the blockchain (easy viewability).

Member Assignments:

Pair programming on smart contract.