

```
pragma solidity >=0.4.22 <0.6.0;
```

```
contract EthWill {
```

```
    enum State {INITIATED, COMPLETE}
```

```
    State currentState;
```

```
    address benefactor;
```

```
    address representative;
```

```
    address payable[] beneficiaries;
```

```
    mapping(address => uint) public assigned_eth;
```

```
    constructor(address executer) public {
```

```
        require(executer != msg.sender);
```

```
        benefactor = msg.sender;
```

```
        representative = executer;
```

```
    }
```

```
    /*-----<Modifiers>-----*/
```

```
    modifier onlyBenefactor() {
```

```
        require(msg.sender == benefactor);
```

```
        _;
```

```
    }
```

```
    modifier restricted() {
```

```
        require(msg.sender == representative || msg.sender == benefactor);
```

```
        _;
```

```
    }
```

```
    modifier inState(State expectedState) {
```

```
        require(currentState == expectedState);
```

```
        _;
```

```
    }
```

```
    /*-----<Will Functions>-----*/
```

```
    function assign_eth(address payable[] memory receivers, uint256[] memory eth_finney_amnts) onlyBenefactor payable public {
```

```
        require(msg.value >= totalArray(eth_finney_amnts) * 1 finney);
```

```
        for(uint i = 0; i < receivers.length; i++) {
```

```
            beneficiaries.push(receivers[i]);
```

```
            assigned_eth[receivers[i]] = eth_finney_amnts[i];
```

```
        }
```

```
        currentState = State.INITIATED;
```

```
    }
```

```
    function execute_will() public inState(State.INITIATED) restricted {
```

```
        for(uint i = 0; i < beneficiaries.length; i++) {
```

```
            beneficiaries[i].transfer(assigned_eth[beneficiaries[i]] * 1 finney);
```

```
        }
```

```
        currentState = State.COMPLETE;
```

```
    }
```

```
    function resetWill(uint wei_amount) public inState(State.INITIATED) onlyBenefactor {
```

```
        for(uint i = 0; i < beneficiaries.length; i++) {
```

```
            assigned_eth[beneficiaries[i]] = 0;
```

```
        }
```

```

    delete beneficiaries;
    msg.sender.transfer(wei_amount * 1 wei);
}

function changeRepresentative(address rep) public onlyBenefactor {
    representative = rep;
}

/*-----<Helper>-----*/
function totalArray(uint256[] memory amounts) private pure returns (uint) {
    uint total;
    for(uint i = 0; i < amounts.length; i++) {
        total += amounts[i];
    }
    return total;
}
}

```