//SPDX-License-Identifier: GPL-3.0

pragma solidity >=0.5.0 <0.9.0;

contract Lottery{

    address payable[] public players;

    address public manager;

    constructor(){

        manager = msg.sender;

    }

    receive () payable external{

        require(msg.value == 0.1 ether);

        players.push(payable(msg.sender));

    }

    function getBalance() public view returns(uint)

    {

        require(msg.sender== manager);

        return address(this).balance;

    }

    function random() internal view returns(uint){

       return uint(keccak256(abi.encodePacked(block.difficulty, block.timestamp, players.length)));

    }

    function pickWinner() public{

        require(msg.sender == manager);

        require (players.length >= 3);

        uint r = random();

        address payable winner;

        uint index = r % players.length;

        winner = players[index];

        winner.transfer(getBalance());

        players = new address payable[](0);

    }

}