



UNIVERSITÀ DI PISA

PEER TO PEER SYSTEMS AND BLOCKCHAINS

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TRY - a nft lotteRY

Final Project

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# 1 DApp - Back end

## 1.1 App.js

```
1 App = {
2
3   contracts: {},
4   web3Provider: null,           // Web3 provider
5   url: 'http://localhost:8545', // Url for web3
6   account: '0x0',             // current ethereum account
7
8   init: function() {
9
10      return App.initWeb3();
11   },
12
13   /* initialize Web3 */
14   initWeb3: function() {
15      console.log("Entered")
16
17      if(typeof web3 !== 'undefined') {
18         App.web3Provider = window.ethereum;
19         web3 = new Web3(App.web3Provider);
20         try {
21            ethereum.enable().then(async() => {
22               console.log("DApp connected to Metamask");
23            });
24         }
25         catch(error) {
26            console.log(error);
27         }
28      } else {
29         App.web3Provider = new Web3.providers.HttpProvider(App.url)
30         ;
31         web3 = new Web3(App.web3Provider);
32      }
33
34      return App.initContract();
35   },
36
37   /* Upload the contract's abstractions */
38   initContract: function() {
39
40      // Get current account
41      web3.eth.getCoinbase(function(err, account) {
42         if(err == null) {
43            App.account = account;
44            $("#accountId").html("Account: " + account);
45         }
46      });
47   }
48 }
```

```

44     }
45   });
46
47   // Load content's abstractions
48   $.getJSON("Lottery.json").done(function(c) {
49     App.contracts["Lottery"] = TruffleContract(c);
50     App.contracts["Lottery"].setProvider(App.web3Provider);
51
52     return App.listenForEvents();
53   });
54 },
55
56 // Write an event listener
57 listenForEvents: function() {
58
59   App.contracts["Lottery"].deployed().then(async (instance) => {
60     const div = document.getElementById("eventId");
61
62     // Event Listener for RoundStart event;
63     instance.roundStart().on('data', function (event) {
64       //$("#eventId").html("Event caught: Round Start");
65       div.innerHTML += '<div class="alert alert-success alert-dismissible fade show" role="alert">
66         New Round Started!
67         <button type="button" class="close" data-dismiss="alert" aria-label="Close">
68           <span aria-hidden="true">&times;</span></button>
69       </div>';
70       $(".alert").hide().fadeIn(200).delay(1500).fadeOut(1000, function () { $(this).remove(); });
71
72       console.log("Event caught: Round Start");
73       console.log(event);
74     });
75
76     // Event Listener for TicketBuy event;
77     instance.ticketBuy().on('data', function (event) {
78       div.innerHTML += '<div class="alert alert-success alert-dismissible fade show" role="alert">
79         Ticket Buy Event
80         <button type="button" class="close" data-dismiss="alert" aria-label="Close">
81           <span aria-hidden="true">&times;</span></button>
82       </div>';
83       $(".alert").hide().fadeIn(200).delay(1500).fadeOut(1000, function () { $(this).remove(); });
84       console.log("Event caught: Ticket Buy");
85     });
86

```

```

87         console.log(event);
88     });
89
90     // Event Listener for LotteryClosed event;
91     instance.lotteryClosed().on('data', function (event) {
92         div.innerHTML += '<div class="alert alert-success
93             alert-dismissible fade show" role="alert">
94             Lottery Closed!
95             <button type="button" class="close" data-dismiss="
96                 alert" aria-label="Close">
97                 <span aria-hidden="true">&times;</span>
98             </button>
99             </div>';
100         $(".alert").hide().fadeIn(200).delay(1500).fadeOut
101             (1000, function () { $(this).remove(); });
102         console.log("Event caught: Lottery Closed");
103         console.log(event);
104     });
105
106     // Event Listener for RoundClosed event;
107     instance.roundClosed().on('data', function (event) {
108         //$("#eventId").html("Event caught: Round Closed")
109         ;
110         div.innerHTML += '<div class="alert alert-success
111             alert-dismissible fade show" role="alert">
112             Current round closed, wait for a new round!
113             <button type="button" class="close" data-dismiss="
114                 alert" aria-label="Close">
115                 <span aria-hidden="true">&times;</span>
116             </button>
117             </div>';
118         $(".alert").hide().fadeIn(200).delay(1500).fadeOut
119             (1000, function () { $(this).remove(); });
120         console.log("Event caught: Round Closed");
121         console.log(event);
122     });
123
124     // Event Listener for LotteryStart event;
125     instance.lotteryStart().on('data', function (event) {
126         $("#eventId").html('<div class="alert alert-success
127             alert-dismissible fade show" role="alert">
128             Lottery Started!
129             <button type="button" class="close" data-dismiss="
130                 alert" aria-label="Close">
131                 <span aria-hidden="true">&times;</span>
132             </button>
133             </div>');
134         $(".alert").hide().fadeIn(200).delay(1500).fadeOut
135             (1000, function () { $(this).remove(); });

```



```

167     sessionStorage.setItem("lotteryOperator",
168         addressLotteryOperator.toLowerCase());
169     window.location.reload();
170 }
171 sessionStorage.setItem("currentUser", App.account);
172 blockNumber = await web3.eth.getBlockNumber();
173 closingBlock = await instance.ticketingCloses();
174 duration = await instance.lotteryDuration();
175
176 roundStartBlock = parseInt(closingBlock) - parseInt(
177     duration);
178
179 $("#currentBlock").html("Current Block :"+ blockNumber);
180 $("#closingBlock").html("Closing Block :"+ closingBlock);
181 $("#roundStartBlock").html("Round Start Block :"+
182     roundStartBlock);
183
184 instance.getPastEvents('numbersDrawn', {
185     fromBlock: roundStartBlock,
186     toBlock: 'latest'
187 }, function(error, events){ console.log(events); })
188 .then(function(events){
189     if(events.length != 0){
190         $("#drawnNumbers").html("Last Drawn Numbers: " + events
191             [0].returnValues.winningNumbers.toString());
192     }
193 });
194 tokenURI = await instance.getURI(0);
195
196 instance.getPastEvents('awardPlayer', {
197     fromBlock: roundStartBlock,
198     toBlock: 'latest'
199 }, function(error, events){ console.log(events); })
200 .then(async(events) =>{
201
202     if(events.length != 0 && sessionStorage.getItem("
203         currentUser") == events[0].returnValues.player.
204         toLowerCase()){
205         for(i = 0; i < events.length; i++){
206             tokenURI = await instance.getURI(events[i].
207                 returnValues.prize);
208             $("#prizes").append('<figure class="figure">
209                 
213                 <figcaption class="figure-caption">Account: ' +
214                     events[i].returnValues.player + ' has won
215                     NFT #: ' + events[i].returnValues.prize + '

```

```

204         </figcaption>
205     </figure>
206     <hr style="height:2px;border-width:0;color:gray;
207         background-color:gray;width:95%">`);
208 }
209 }
210 });
211
212 if(window.location.href == "http://localhost:3000/nftList.
213     html"){
214
215     nftList = await instance.getNFTList(App.account,{
216         from:App.account});
217     if(nftList.length != 0){
218         for(j = 0; j < nftList.length; j++){
219             tokenURI = await instance.getURI(nftList[j]
220                 .words[0]);
221
222             $("#allPrizes").append('<figure class="
223                 figure">
224                 
228                 <figcaption class="figure-caption">Account
229                     :'+ App.account + ' has won NFT #:' +
230                     nftList[j].words[0] + ' </figcaption>
231                 </figure>
232                 <hr style="height:2px;border-width:0;color:
233                     gray;background-color:gray;width:95%">`
234                 ;
235             }
236         }
237     }
238 }
239
240 // Call a function from a smart contract
241 // The function send an event that triggers a transaction::
242 // Metamask opens to confirm the transaction by the user
243 buyTicket: function() {
244     const numbers = [];
245     const div = document.getElementById("eventId");
246     textInput = document.getElementsByName("numbers")
247     for(i = 0; i < 6; i++){
248         if(textInput[i].value != ""){
249             numbers[i] = textInput[i].value;
250             textInput[i].value = "";
251         }
252     }
253 }

```



```

239     }
240     console.log(numbers[i]);
241 }
242 if(numbers.length == 6){
243 App.contracts["Lottery"].deployed().then(async(instance) =>{
244     try{
245         await instance.buy(numbers,{from:App.account, value:
246             10000000000000000000});
247     }
248     catch(e){
249         if(e.reason == "invalid BigNumber string"){
250             div.innerHTML += '<div class="alert alert-danger" role="
251                 alert">
252                 <svg xmlns="http://www.w3.org/2000/svg" width="24"
253                     height="24" fill="currentColor" class="bi bi-
254                         exclamation-triangle-fill flex-shrink-0 me-2"
255                         viewBox="0 0 16 16" role="img" aria-label="Warning:"
256                         >
257                 <path d="M8.982 1.566a1.13 1.13 0 0 0-1.96 0L.165
258                     13.233c-.457.778.091 1.767.98 1.767h13.713c.889 0
259                     1.438-.99.98-1.767L8.982 1.566zM8 5c.535 0
260                     .954.462.995.995l-.35 3.507a.552.552 0 0 1-1.1 0L7.1
261                     5.995A.905.905 0 0 1 8 5zm.002 6a1 1 0 1 1 0 2 1 1 0
262                     0 1 0-2z"/>
263                 </svg>
264                 <h4 class="alert-heading">Oops..</h4>
265                 <p>Check numbers inserted in the form!</p>
266                 <hr>
267                 <p class="mb-0">Please choose six different numbers!
268                     You cannot insert letters in the box!</p>
269             </div>
270             ';
271             $(".alert").hide().fadeIn(200).delay(1500).fadeOut(1000,
272                 function () { $(this).remove(); });
273         }else{
274             div.innerHTML += '<div class="alert alert-danger" role="
275                 alert">
276                 <svg xmlns="http://www.w3.org/2000/svg" width="24"
277                     height="24" fill="currentColor" class="bi bi-
278                         exclamation-triangle-fill flex-shrink-0 me-2"
279                         viewBox="0 0 16 16" role="img" aria-label="Warning:"
280                         >
281                 <path d="M8.982 1.566a1.13 1.13 0 0 0-1.96 0L.165
282                     13.233c-.457.778.091 1.767.98 1.767h13.713c.889 0
283                     1.438-.99.98-1.767L8.982 1.566zM8 5c.535 0
284                     .954.462.995.995l-.35 3.507a.552.552 0 0 1-1.1 0L7.1
285                     5.995A.905.905 0 0 1 8 5zm.002 6a1 1 0 1 1 0 2 1 1 0

```

```

    0 1 0-2z"/>
266     </svg>
267     <h4 class="alert-heading">Oops..</h4>
268     <p>Lottery round already closed!</p>
269     <hr>
270     <p class="mb-0">Please wait for a new round!</p>
271 </div>
272 `;
273 $(".alert").hide().fadeIn(200).delay(1500).fadeOut(1000,
    function () { $(this).remove(); });
274
275     }
276
277     }
278   });
279 } else {
280   div.innerHTML += `<div class="alert alert-danger" role="alert">
281     <svg xmlns="http://www.w3.org/2000/svg" width="24" height="24"
282       fill="currentColor" class="bi bi-exclamation-triangle-fill
        flex-shrink-0 me-2" viewBox="0 0 16 16" role="img" aria-
        label="Warning:">
283       <path d="M8.982 1.566a1.13 1.13 0 0 0-1.96 0L1.165 13.233c
        -.457.778.091 1.767.98 1.767h13.713c.889 0
        1.438-.99.98-1.767L8.982 1.566zM8 5c.535 0 .954.462.9951
        -.35 3.507a.552.552 0 0 1-1.1 0L7.1 5.995A.905.905 0 0 1 8 5
        zm.002 6a1 1 0 1 1 0 2 1 1 0 0 1 0-2z"/>
284     </svg>
285     <h4 class="alert-heading">Oops..</h4>
286     <p>Check numbers inserted in the form!</p>
287     <hr>
288     <p class="mb-0">Please choose six different numbers!</p>
289   </div>
290   `;
291   $(".alert").hide().fadeIn(200).delay(1500).fadeOut(1000,
    function () { $(this).remove(); });
292 }
293 },
294 startLottery: function() {
295   const lotteryDuration = document.getElementsByName("
    lotteryDuration");
296   const div = document.getElementById("eventId");
297   App.contracts["Lottery"].deployed().then(async(instance) =>{
298     try {
299       await instance.startLottery(lotteryDuration[0].value,{
        from:App.account});
300
301     } catch (e) {
302       if(e.reason == "invalid BigNumber string"){

```

```

303     div.innerHTML += '<div class="alert alert-danger'
304         role="alert">
305         <svg xmlns="http://www.w3.org/2000/svg" width="24"
            height="24" fill="currentColor" class="bi bi-
            exclamation-triangle-fill flex-shrink-0 me-2"
            viewBox="0 0 16 16" role="img" aria-label="
            Warning:">
306         <path d="M8.982 1.566a1.13 1.13 0 0 0-1.96 0L.165
            13.233c-.457.778.091 1.767.98 1.767h13.713c.889
            0 1.438-.99.98-1.767L8.982 1.566zM8 5c.535 0
            .954.462.9951-.35 3.507a.552.552 0 0 1-1.1 0L7
            .1 5.995A.905.905 0 0 1 8 5zm.002 6a1 1 0 1 1 0
            2 1 1 0 0 1 0-2z"/>
307         </svg>
308         <h4 class="alert-heading">Oops..</h4>
309         <p>Check lottery duration!</p>
310         <hr>
311         <p class="mb-0">Please insert the duration of a
            single lottery round.</p>
312     </div>
313     '
314     $(".alert").hide().fadeIn(200).delay(1500).fadeOut
315     (1000, function () { $(this).remove(); });
316 }
317 else{
318     div.innerHTML += '<div class="alert alert-
            danger" role="alert">
319     <svg xmlns="http://www.w3.org/2000/svg" width="
            24" height="24" fill="currentColor" class="
            bi bi-exclamation-triangle-fill flex-shrink
            -0 me-2" viewBox="0 0 16 16" role="img" aria
            -label="Warning:">
320     <path d="M8.982 1.566a1.13 1.13 0 0 0-1.96 0L
            .165 13.233c-.457.778.091 1.767.98 1.767h13
            .713c.889 0 1.438-.99.98-1.767L8.982 1.566
            zM8 5c.535 0 .954.462.9951-.35 3.507a
            .552.552 0 0 1-1.1 0L7.1 5.995A.905.905 0 0
            1 8 5zm.002 6a1 1 0 1 1 0 2 1 1 0 0 1 0-2z"
            />
321     </svg>
322     <h4 class="alert-heading">Oops..</h4>
323     <p>Lottery already existing!</p>
324     <hr>
325     <p class="mb-0">Please close the current
            lottery to open a new one.</p>
326     </div>
327     '
    $(".alert").hide().fadeIn(200).delay(1500).

```

```

328         fadeOut(1000, function () { $(this).remove()
329             ; });
330     }
331 }
332 });
333 },
334 closeLottery: function() {
335     App.contracts["Lottery"].deployed().then(async(instance) =>{
336         await instance.closeLottery({from:App.account});
337         localStorage.setItem("closed", true);
338     });
339 },
340 },
341 closeRound: function() {
342     const div = document.getElementById("eventId");
343
344     App.contracts["Lottery"].deployed().then(async(instance) =>{
345         roundClose = await instance.ticketingCloses();
346         blockNumber = await web3.eth.getBlockNumber();
347
348         if(blockNumber == roundClose){
349             try{
350                 await instance.closeRound({from:App.account});
351             }catch(e){
352                 console.log(e.reason);
353                 if(e.reason == "Round still open, please wait lottery
354                     round ends!"){
355                     div.innerHTML += '<div class="alert alert-danger"
356                         role="alert">
357                         <svg xmlns="http://www.w3.org/2000/svg" width="24"
358                             height="24" fill="currentColor" class="bi bi-
359                                 exclamation-triangle-fill flex-shrink-0 me-2"
360                                 viewBox="0 0 16 16" role="img" aria-label="
361                                     Warning:">
362                         <path d="M8.982 1.566a1.13 1.13 0 0 0-1.96 0L.165
363                             13.233c-.457.778.091 1.767.98 1.767h13.713c.889
364                             0 1.438-.99.98-1.767L8.982 1.566zM8 5c.535 0
365                             .954.462.995.905 0 0 1 8 5zm.002 6a1 1 0 1 1 0
366                             2 1 1 0 0 1 0-2z"/>
367                         </svg>
368                         <h4 class="alert-heading">Oops..</h4>
369                         <p>Round still open, please wait lottery round ends
370                             !</p>
371                         <hr>
372                         <p class="mb-0">You cannot close the current
373                             lottery round until it ends!</p>

```

```

362         </div>
363         `;
364         $(".alert").hide().fadeIn(200).delay(1500).fadeOut
            (1000, function () { $(this).remove(); });
365     }
366 }
367 }else{
368     div.innerHTML += `<div class="alert alert-danger" role=
        "alert">
369     <svg xmlns="http://www.w3.org/2000/svg" width="24"
        height="24" fill="currentColor" class="bi bi-
        exclamation-triangle-fill flex-shrink-0 me-2"
        viewBox="0 0 16 16" role="img" aria-label="Warning:"
        >
370     <path d="M8.982 1.566a1.13 1.13 0 0 0-1.96 0L.165
        13.233c-.457.778.091 1.767.98 1.767h13.713c.889 0
        1.438-.99.98-1.767L8.982 1.566zM8 5c.535 0
        .954.462.995.995l-.35 3.507a.552.552 0 0 1-1.1 0L7.1
        5.995A.905.905 0 0 1 8 5zm.002 6a1 1 0 1 1 0 2 1 1 0
        0 1 0-2z"/>
371     </svg>
372     <h4 class="alert-heading">Oops..</h4>
373     <p>Round still open, please wait lottery round ends!</p>
        >
374     <hr>
375     <p class="mb-0">You cannot close the current lottery
        round until it ends!</p>
376 </div>
377 `;
378 $(".alert").hide().fadeIn(200).delay(1500).fadeOut(1000,
        function () { $(this).remove(); });
379 }
380 });
381 },
382 startRound: function() {
383     const div = document.getElementById("eventId");
384
385     App.contracts["Lottery"].deployed().then(async(instance) =>{
386         roundClose = await instance.ticketingCloses();
387         blockNumber = await web3.eth.getBlockNumber();
388         if(blockNumber >= roundClose){
389             try{
390                 await instance.startNewRound({from:App.account});
391             }catch(e){
392                 console.log(e.reason);
393             }
394         }else{
395
396

```

```

397         div.innerHTML += '<div class="alert alert-danger"
398             role="alert">
399             <svg xmlns="http://www.w3.org/2000/svg" width="24"
400                 height="24" fill="currentColor" class="bi bi-
401                 exclamation-triangle-fill flex-shrink-0 me-2"
402                 viewBox="0 0 16 16" role="img" aria-label="
403                 Warning:">
404             <path d="M8.982 1.566a1.13 1.13 0 0 0-1.96 0L1.165
405                 13.233c-.457.778.091 1.767.98 1.767h13.713c.889
406                 0 1.438-.99.98-1.767L8.982 1.566zM8 5c.535 0
407                 .954.462.995.995-.35 3.507a.552.552 0 0 1-1.1 0L7
408                 .1 5.995A.905.905 0 0 1 8 5zm.002 6a1 1 0 1 1 0
409                 2 1 1 0 0 1 0-2z"/>
410             </svg>
411             <h4 class="alert-heading">Oops..</h4>
412             <p>Round still open, please wait lottery round ends
413             !</p>
414             <hr>
415             <p class="mb-0">You cannot close the current
416             lottery round until it ends!</p>
417         </div>
418         ';
419         $(".alert").hide().fadeIn(200).delay(1500).fadeOut
420         (1000, function () { $(this).remove(); });
421     }
422
423     });
424
425     },
426     showPrizes: function(){
427
428         App.contracts["Lottery"].deployed().then(async(instance) =>{
429             nftList = await instance.getNFTList(App.account.toLowerCase
430             (),{from:App.account});
431             window.location.replace("http://localhost:3000/nftList.html
432             ");
433
434             if(nftList.length != 0){
435                 const div = document.getElementById("#allPrizes");
436                 for(i = 0; i < nftList.length; i++){
437                     tokenURI = await instance.getURI(nftList[i].words[0]);
438
439                     $("#allPrizes").append('<figure class="figure">
440                         
443                     <figcaption class="figure-caption">Account:' + App.
444                         account + ' has won NFT #: ' + nftList[i].words[0] +
445                         ' </figcaption>
446                     </figure>

```

```

427         <hr style="height:2px;border-width:0;color:gray;
428             background-color:gray;width:95%">');
429     }
430 }
431 });
432
433
434 }
435
436 }
437 routing = {
438
439     getUserIndex: function(){
440         window.location.replace("http://localhost:3000/userIndex.
441             html");
442     },
443     getManagerIndex: function(){
444         window.location.replace("http://localhost:3000/managerIndex
445             .html");
446     },
447     redirect: function(){
448
449         if(localStorage.getItem("closed") == 'true' && window.location.
450             href != "http://localhost:3000/lotteryClosed.html"){
451             window.location.replace("http://localhost:3000/
452                 lotteryClosed.html");
453         }
454
455         if(sessionStorage.getItem("currentUser") == sessionStorage.
456             getItem("lotteryOperator") && window.location.href != "http
457             ://localhost:3000/managerIndex.html" && window.location.href !=
458             "http://localhost:3000/nftList.html"){
459             window.location.replace("http://localhost:3000/managerIndex
460                 .html");
461         }
462         if(sessionStorage.getItem("currentUser") != sessionStorage.
463             getItem("lotteryOperator") && window.location.href != "http
464             ://localhost:3000/userIndex.html" && window.location.href !=
465             "http://localhost:3000/nftList.html" ){
466             window.location.replace("http://localhost:3000/userIndex.
467                 html");
468         }
469     }
470 }
471
472 // Call App.init and routing.redirect() whenever the window loads;

```

```

463 $(function() {
464     $(window).on('load', function () {
465         App.init();
466         routing.redirect();
467     });
468 });

```

## 1.2 Lottery.sol

```

1 // SPDX-License-Identifier: MIT
2 pragma solidity ^0.8.0;
3
4 import "./LotteryMint.sol";
5
6 contract Lottery{
7
8     //Data struct to manage player's address and played numbers
9     struct Ticket{
10         address playerAddress;
11         uint [] playedNumbers;
12     }
13
14     uint private constant TICKET_PRICE = 1 ether;
15     address payable public lotteryOperator; //Address of the lottery
        operator
16
17     uint public ticketingCloses;
18
19     //Declaration of LotteryMint contract
20     LotteryMint item;
21
22     //List of NFTs IDs
23     uint256 [8] private NFTList;
24
25     //Array for sorted winning numbers
26     uint256 [6] private winningNumbers;
27
28     mapping (address => uint256 []) public wonNFTs ;
29
30     uint8 private previousValue;
31     Ticket [] private tickets;
32     uint public lotteryDuration;
33     uint private DEBUG = 1;
34     uint private K = 11;
35
36     // Events
37     event ticketBuy(address player);
38     event roundClosed();
39     event roundStart();

```



```

40 event NFTMinted(address NFTOwner, uint256 newNFTId);
41 event awardPlayer(address player, uint256 prize);
42 event numbersDrawn(uint256[6] winningNumbers);
43 event lotteryClosed();
44 event lotteryStart();
45
46
47
48
49 constructor (){}
50
51 //Function to create a new Lottery
52 function startLottery (uint duration) public {
53     require(lotteryOperator == address(0), "Already existing lottery
54         !");
55     lotteryOperator = payable(msg.sender);
56     item = new LotteryMint();
57     ticketingCloses = block.number + duration;
58     lotteryDuration = duration;
59     for(uint i = 1; i < 9; i++){
60         mint(i);
61     }
62     emit lotteryStart();
63 }
64
65 //Function to buy a new Ticket and to choose numbers to play
66 function buy (uint [] memory numbers) public payable {
67     require(block.number <= ticketingCloses, "Lottery round already
68         closed, wait for a new round please!");
69     require(msg.value == TICKET_PRICE, "Not enough money, Ticket
70         Price --> 1 Ether");
71     require(numbers.length == 6, "Please choose exactly six
72         different numbers!");
73     Ticket memory newTicket;
74     newTicket.playerAddress = msg.sender;
75     newTicket.playedNumbers = numbers;
76     tickets.push(newTicket);
77     emit ticketBuy(msg.sender);
78 }
79
80 //Function to select and award winners
81 function givePrizes () private {
82     require(msg.sender == lotteryOperator, "You are not the lottery
83         operator, permission denied!");
84     require(block.number > ticketingCloses, "Round still open,
85         please wait lottery round ends!");
86
87     uint guessed = 0;
88     uint class = 0;

```

```

83     bool powerBall = false;
84
85     for(uint i = 0; i < tickets.length ;i++){
86         Ticket memory player = tickets[i];
87         for(uint j = 0; j < player.playedNumbers.length - 1 ; j++){
88             uint num = player.playedNumbers[j];
89             for(uint k = 0; k < 5; k++){
90                 if(num == winningNumbers[k]){
91                     guessed++;
92                 }
93             }
94         }
95         if(player.playedNumbers[5] == winningNumbers[5]){
96             powerBall = true;
97         }
98         class = uint(selectClass(guessed, powerBall));
99
100        if(class > 0){
101            item.sendNFT(player.playerAddress, NFTList[class - 1]);
102            emit awardPlayer(player.playerAddress, NFTList[class -
103                1]);
104            wonNFTs[player.playerAddress].push(NFTList[class - 1]);
105            mint(class);
106        }
107        powerBall = false;
108        guessed = 0;
109    }
110
111    //Function used to select correct prize class
112    function selectClass (uint guessed, bool powerBall) private pure
113    returns(uint) {
114        uint prize = 0;
115
116        if(guessed == 0 && powerBall){
117            prize = 8;
118        }else{
119            if(guessed == 1 && !powerBall){
120                prize = 7;
121            }else{
122                if(guessed == 2 && !powerBall || (guessed == 1 &&
123                    powerBall)){
124                    prize = 6;
125                }else{
126                    if(guessed == 3 && !powerBall || (guessed == 2 &&
127                        powerBall)){
128                        prize = 5;
129                    }else{
130                        if(guessed == 4 && !powerBall || (guessed == 3

```

```

128         && powerBall)){
129             prize = 4;
130         }else{
131             if(guessed == 4 && powerBall){
132                 prize = 3;
133             }else{
134                 if(guessed == 5 && !powerBall){
135                     prize = 2;
136                 }else{
137                     if(guessed == 5 && powerBall){
138                         prize = 1;
139                     }
140                 }
141             }
142         }
143     }
144 }
145 }
146 return prize;
147 }
148 //Function used to start a new lottery round
149 function startNewRound () public {
150     require(msg.sender == lotteryOperator, "You are not the lottery
151         operator, permission denied!");
152     require(block.number > ticketingCloses, "Round still open,
153         please wait lottery round ends!");
154     delete winningNumbers;
155     delete tickets;
156     ticketingCloses = block.number + lotteryDuration;
157     emit roundStart();
158 }
159 //Function for lottery operator to draw winning numbers
160 function drawNumbers () private {
161     if(DEBUG == 1){
162         for (uint i = 0; i < 5; i++){
163             winningNumbers[i] = i+1;
164         }
165         winningNumbers[5] = 6;
166     }else{
167         require(msg.sender == lotteryOperator, "You are not the lottery
168             operator, permission denied!");
169         require(block.number > ticketingCloses, "Round still open,
170             please wait lottery round ends!");
171         for (uint i = 0; i < 6; i++){
172             if(i == 5){
173                 winningNumbers[i] = rand(26);

```

```

172     }
173     else{
174         winningNumbers[i] = rand(69);
175     }
176     for(uint j = 0; j <= i; j++){
177         if(winningNumbers[i] == winningNumbers[j] && i != 5){
178             winningNumbers[i] = rand(69);
179         }
180         if(winningNumbers[i] == winningNumbers[j] && i == 5){
181             winningNumbers[i] = rand(26);
182         }
183     }
184 }
185 }
186
187     emit numbersDrawn(winningNumbers);
188 }
189
190 //Function used draw numbers and give prizes. Only the lottery
191 //operator can call this function.
192 function closeRound () public{
193     require(msg.sender == lotteryOperator, "You are not the lottery
194     operator, permission denied!");
195     require(block.number >= ticketingCloses, "Round still open,
196     please wait lottery round ends!");
197     drawNumbers();
198     givePrizes();
199     withdraw();
200     emit roundClosed();
201 }
202
203 //Function used to close the Lottery and deactivate the contract
204 function closeLottery () public {
205     require(msg.sender == lotteryOperator, "You are not the lottery
206     operator, permission denied!");
207     address payable refunded;
208     if (block.number <= ticketingCloses){
209         for (uint i = 0; i < tickets.length ;i++){
210             refunded = payable(tickets[i].playerAddress);
211             refunded.transfer(TICKET_PRICE);
212         }
213     }
214     emit lotteryClosed();
215     selfdestruct(payable(msg.sender));
216 }
217
218 //Function used to mint a new NFT
219 function mint (uint class) private{
220     require(msg.sender == lotteryOperator, "You are not the lottery

```

```

        operator, permission denied!");
217     uint256 NFT_ID = uint256(item.awardItem(class));
218     NFTList[class - 1] = NFT_ID;
219     emit NFTMinted(msg.sender, NFT_ID);
220 }
221
222 //Function used by the lottery operator to send contract balance to
    the lottery operator's address
223 function withdraw () private {
224     require(msg.sender == lotteryOperator, "You are not the lottery
        operator, permission denied!");
225     require(block.number > ticketingCloses, "Round still open,
        please wait lottery round ends!");
226     lotteryOperator.transfer(address(this).balance);
227 }
228
229 //Function used to deterministically extract pseudo-random winning
    numbers for the lottery
230 function rand(uint modulus) private returns (uint8) {
231     previousValue = uint8((uint256(keccak256(abi.encodePacked(block
        .number + K + block.timestamp, previousValue))))% modulus);
232     K += 1;
233     return previousValue;
234 }
235
236 //Function used to get URI linked to minted NFT;
237 function getURI(uint256 tokenID) view public returns (string memory
    ){
238     return item.getTokenURI(tokenID);
239 }
240
241 //Function used to get all NFTs won by a specif player;
242 function getNFTList(address player) view public returns (uint256[]
    memory){
243     return wonNFTs[player];
244 }
245 }

```

### 1.3 LotteryMint.sol

```

1 // SPDX-License-Identifier: MIT
2 pragma solidity ^0.8.0;
3
4 import "@openzeppelin/contracts/token/ERC721/ERC721.sol";
5 import "@openzeppelin/contracts/token/ERC721/extensions/
    ERC721URIStorage.sol";
6 import "@openzeppelin/contracts/utils/Counters.sol";
7
8 contract LotteryMint is ERC721URIStorage {

```

```

9      using Counters for Counters.Counter;
10     Counters.Counter private _tokenIds;
11
12
13     string [8] public URI;
14     uint256 [] public tokens;
15     address lotteryOperator;
16
17
18
19     constructor() ERC721("LotteryMint", "LTM") {
20
21         lotteryOperator = msg.sender;
22         URI[0] = "https://i.ibb.co/Y8Pn24g/Petra-Giordania.webp";
23         URI[1] = "https://i.ibb.co/SvTgc6W/Grande-Muraglia-Cinese-Cina.
24             webp";
25         URI[2] = "https://i.ibb.co/NW9znYb/Colosseo-Italia.webp";
26         URI[3] = "https://i.ibb.co/Lzzj9jB/Machu-Picchu-Peru.webp";
27         URI[4] = "https://i.ibb.co/zXNHshT/Cristo-Redentore-Brasile.
28             webp";
29         URI[5] = "https://i.ibb.co/9HJ08Yn/Chiche-n-Itza-Messico.webp";
30         URI[6] = "https://i.ibb.co/64WMgpX/Taj-Mahal-India.webp";
31         URI[7] = "https://i.ibb.co/p3scMKw/7-Meraviglie-del-mondo-
32             moderno.jpg";
33     }
34
35     function awardItem(uint class)
36         public
37         returns (uint256)
38     {
39         require(class > 0 && class < 9, "Please insert a correct class
40             for the prize!");
41         uint256 newItemId = _tokenIds.current();
42         _mint(lotteryOperator, newItemId);
43         _setTokenURI(newItemId, URI[class - 1]);
44         _tokenIds.increment();
45         return newItemId;
46     }
47
48     function sendNFT (address player, uint256 tokenId) public{
49         require(msg.sender == lotteryOperator, "You are not the lottery
50             operator, permission denied!");
51         safeTransferFrom(lotteryOperator, player, tokenId);
52     }
53
54     function getTokenURI(uint256 tokenId) view public returns (string
55         memory){
56         return tokenURI(tokenId);
57     }

```

```

52     }
53
54
55 }

```

## 1.4 Migrations.sol

```

1 // SPDX-License-Identifier: MIT
2 pragma solidity >=0.4.22 <0.9.0;
3
4 contract Migrations {
5     address public owner = msg.sender;
6     uint public last_completed_migration;
7
8     modifier restricted() {
9         require(
10             msg.sender == owner,
11             "This function is restricted to the contract's owner"
12         );
13         _;
14     }
15
16     function setCompleted(uint completed) public restricted {
17         last_completed_migration = completed;
18     }
19 }

```

## 2 DApp - Front end

### 2.1 Index.html

```

1 <!DOCTYPE html>
2 <html>
3 <head>
4     <meta charset="utf-8" />
5     <meta http-equiv="X-UA-Compatible" content="IE=edge">
6     <meta name="viewport" content="width=device-width, initial-scale=1"
7         >
8
9     <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/
10         bootstrap/4.1.3/css/bootstrap.min.css" integrity="sha384-MCw98/
11         SFnGE8fJT3GXwEOngsV7Zt27NXFoaoApmYm81iuXoPkFOJwJ8ERdknLPMO "
12         crossorigin="anonymous">
13
14     <title>TRY!</title>
15 </head>
16 <body>

```

```

14 <nav class="navbar navbar-dark bg-dark">
15   <a class="navbar-brand mb-0 h1" href="/index.html">TRY -
      Lottery</a>
16   <span class="navbar-text" id="accountId">
17     Account:
18   </span>
19 </nav>
20 <div class="container" style="background-color:#ffffff" >
21   <div class="row" style="background-color: #ffffff">
22     <div class="col-lg-2">
23     </div>
24     <div id="mainUI" class="col-lg-9">
25       <div class="card text-center">
26         <div class="card-body">
27           <h1 class="text-center">Try Lottery</h1
              >
28           <p class="card-text">Please choose your
              Account</p>
29           <button class="btn btn-primary" onclick
              ="routing.getManagerIndex()">Lottery
              Manager</button>
30           <button class="btn btn-primary" onclick
              ="routing.getUserIndex()">User</
              button>
31         </div>
32       </div>
33       <div id="eventId"></div>
34     </div>
35   </div>
36 </div>
37 </div>
38
39
40 <!-- jQuery first, then Popper.js, then Bootstrap JS -->
41 <script src="https://code.jquery.com/jquery-3.3.1.min.js"></script>
42 <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js
      /1.14.3/umd/popper.min.js" integrity="sha384-ZMP7rVo3mIykV+2+9
      J3UJ46jBkOWLauAdn689aCwoqbBJiSnjAK/l8WvCWPIpM49" crossorigin="
      anonymous"></script>
43 <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.1.3/js/
      bootstrap.min.js" integrity="sha384-ChfqqxuZUCnJSK3+
      MXmPNlY66ZbWh2IMqE241rYiqJxyMiZ60W/JmZQ5stWEULTy" crossorigin="
      anonymous"></script>
44
45 <!-- Web3 -->
46 <script src="./dist/web3.min.js"></script>
47 <script src="./dist/truffle-contract.js"></script>
48 <!-- App -->
49 <script src="./js/app.js"></script>

```



```

50
51
52 </body>
53 </html>

```

## 2.2 userIndex.html

```

1 <!DOCTYPE html>
2 <html>
3 <head>
4     <meta charset="utf-8" />
5     <meta http-equiv="X-UA-Compatible" content="IE=edge">
6     <meta name="viewport" content="width=device-width, initial-scale=1"
7         >
8     <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/
9         bootstrap/4.1.3/css/bootstrap.min.css" integrity="sha384-MCw98/
10         SFnGE8fJT3GXwEOngsV7Zt27NXFoaoApmYm81iuXoPkF0JwJ8ERdknLPM0 "
11         crossorigin="anonymous">
12 </head>
13 <body>
14     <nav class="navbar navbar-dark bg-dark">
15         <a class="navbar-brand mb-0 h1" href="/index.html">TRY -
16             Lottery</a>
17         <span class="navbar-text" id="accountId">
18             Account:
19         </span>
20     </nav>
21     <div class="container " style="background-color:#f5f5f5" >
22         <div class="row" style="background-color: #f5f5f5;">
23             <div class="col-lg-2">
24                 <br>
25                 <br>
26                 <br>
27                 <br>
28                 <h6 id="currentBlock">Current Block:</h6>
29                 <h6 id="closingBlock">Closing Block:</h6>
30                 <h6 id="roundStartBlock">Starting Block:</h6>
31             </div>
32             <div id="mainUI" class="col-lg-9">
33                 <h1 class="text-center">Welcome Back, User!</h1>
34                 <div class="card text-center">
35                     <div class="card-body">
36                         <h5 class="card-title">Choose your Numbers!</h5>
37                         <div class="input-group mb-3">
38                             <input name="numbers" type="text" class="form-

```

```

        control" aria-label="InputNumberOne" aria-
        describedby="inputGroup-sizing-default"
        placeholder="Number 1" value="">
38 <input name="numbers" type="text" class="form-
        control" aria-label="InputNumberTwo" aria-
        describedby="inputGroup-sizing-default"
        placeholder="Number 2" value="">
39 <input name="numbers" type="text" class="form-
        control" aria-label="InputNumberThree" aria-
        describedby="inputGroup-sizing-default"
        placeholder="Number 3" value="">
40 <input name="numbers" type="text" class="form-
        control" aria-label="InputNumberFour" aria-
        describedby="inputGroup-sizing-default"
        placeholder="Number 4" value="">
41 <input name="numbers" type="text" class="form-
        control" aria-label="InputNumberFive" aria-
        describedby="inputGroup-sizing-default"
        placeholder="Number 5" value="">
42
43 <input id="powerball" name="numbers" type="text
        " class="form-control" aria-label="
        InputNumberSix" aria-describedby="inputGroup
        -sizing-default" placeholder="PowerBall"
        value="">
44 <p id="passwordHelpBlock" class="form-text text
        -muted">
45     Please choose 6 different numbers and buy a
        ticket to start to play!
46     <br>
47     You can choose first five numbers between 0
        - 69 and the sixth number, the
        Powerball, can be chosen between 0 - 29.
48     <br>
49     Notice that words and symbols are not
        accepted.
50 </p>
51 </div>
52 <button class="btn btn-primary" onclick="App.
        buyTicket()">Buy Ticket</button>
53 <br>
54 <br>
55 <div id="drawnNumbers"></div>
56 </div>
57 </div>
58 <br>
59 <div id="eventId" class="text-center"></div>
60 <br>
61 <div class="card text-center">

```

```

62         <div class="card-body">
63             <h5 class="card-title">NFTs</h5>
64             <p class="card-text">List of last won NFTs</p>
65             <button class="btn btn-primary" onclick="App.
                showPrizes()">Won NFTs</button>
66             <br>
67             <br>
68             <div id="prizes"></div>
69         </div>
70     </div>
71     <br>
72 </div>
73 </div>
74 </div>
75
76
77 <!-- jQuery first, then Popper.js, then Bootstrap JS -->
78 <script src="https://code.jquery.com/jquery-3.3.1.min.js"></script>
79 <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js
    /1.14.3/umd/popper.min.js" integrity="sha384-ZMP7rVo3mIykV+2+9
    J3UJ46jBkOWLaUAdn689aCwoqbBJiSnjAK/l8WvCWPIpM49" crossorigin="
    anonymous"></script>
80 <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.1.3/js/
    bootstrap.min.js" integrity="sha384-ChfqqxuZUCnJSK3+
    MXmPNIyE6ZbWh2IMqE241rYiqJxyMiZ6OW/JmZQ5stwEULTy" crossorigin="
    anonymous"></script>
81
82 <!-- Web3 -->
83 <script src="./dist/web3.min.js"></script>
84 <script src="./dist/truffle-contract.js"></script>
85 <!-- App -->
86 <script src="./js/app.js"></script>
87
88
89 </body>
90 </html>

```

## 2.3 managerIndex.html

```

1 <!DOCTYPE html>
2 <html>
3 <head>
4     <meta charset="utf-8" />
5     <meta http-equiv="X-UA-Compatible" content="IE=edge">
6     <meta name="viewport" content="width=device-width, initial-scale=1"
7     >
8     <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/
    bootstrap/4.1.3/css/bootstrap.min.css" integrity="sha384-MCw98/

```

```

SFnGE8fJT3GXwEOngsV7Zt27NXFoaoApmYm81iuXoPkF0JwJ8ERdknLPM0"
crossorigin="anonymous">
9
10     <title>TRY!</title>
11 </head>
12 <body>
13     <nav class="navbar navbar-dark bg-dark">
14         <a class="navbar-brand mb-0 h1" href="/index.html">TRY -
            Lottery</a>
15         <span class="navbar-text" id="accountId">
16             Account:
17         </span>
18     </nav>
19     <div class="container" style="background-color:#f5f5f5" >
20         <div class="row" style="background-color: #f5f5f5">
21             <div class="col-lg-2">
22                 <br>
23                 <br>
24                 <h3 class="text-center">Operations</h3>
25
26                 <div class="btn-group-vertical">
27                     <span class="col-auto">
28                         <input type="text" name="lotteryDuration" class
                            ="form-control" aria-describedby="
                            passwordHelpInline">
29                         <p class="text-muted text-center">Lottery
                            Duration</p>
30                     </span>
31                     <button class="btn btn-primary" onclick="App.
                            startLottery()">Start Lottery</button>
32                     <button class="btn btn-success" onclick="App.
                            startRound()">Start Round</button>
33                     <button class="btn btn-warning" onclick="App.
                            closeRound()">Close Round</button>
34                     <button class="btn btn-danger" onclick="App.
                            closeLottery()">Close Lottery</button>
35                     <br>
36                     <br>
37                     <h6 id="currentBlock">Current Block:</h6>
38                     <h6 id="closingBlock">Closing Block:</h6>
39                     <h6 id="roundStartBlock">Starting Block:</h6>
40                 </div>
41
42             </div>
43             <div id="mainUI" class="col-lg-9">
44                 <h1 class="text-center">Welcome back, Lottery Manager!<
                    /h1>
45                 <div class="card text-center">
46                     <div class="card-body">

```

```

47     <h5 class="card-title">Choose your Numbers!</h5>
48     <div class="input-group mb-3">
49         <input name="numbers" type="text" class="form-
            control" aria-label="InputNumberOne" aria-
            describedby="inputGroup-sizing-default"
            placeholder="Number 1">
50         <input name="numbers" type="text" class="form-
            control" aria-label="InputNumberTwo" aria-
            describedby="inputGroup-sizing-default"
            placeholder="Number 2">
51         <input name="numbers" type="text" class="form-
            control" aria-label="InputNumberThree" aria-
            describedby="inputGroup-sizing-default"
            placeholder="Number 3">
52         <input name="numbers" type="text" class="form-
            control" aria-label="InputNumberFour" aria-
            describedby="inputGroup-sizing-default"
            placeholder="Number 4">
53         <input name="numbers" type="text" class="form-
            control" aria-label="InputNumberFive" aria-
            describedby="inputGroup-sizing-default"
            placeholder="Number 5">
54
55         <input id="powerball" name="numbers" type="text
            " class="form-control" aria-label="
            InputNumberSix" aria-describedby="inputGroup
            -sizing-default" placeholder="PowerBall">
56     <p id="passwordHelpBlock" class="form-text text
            -muted">
57         Please choose 6 different numbers and buy a
            ticket to start to play!
58         <br>
59         You can choose first five numbers between 0
            - 69 and the sixth number, the
            Powerball, can be chosen between 0 - 29.
60         <br>
61         Notice that words and symbols are not
            accepted.
62     </p>
63 </div>
64 <button class="btn btn-primary" onclick="App.
            buyTicket()">Buy Ticket</button>
65 <br>
66 <br>
67 <p id="drawnNumbers"> </p>
68 </div>
69 </div>
70 <br>
71 <div id="eventId" class="text-center"></div>

```

```

72         <div class="card text-center">
73             <div class="card-body">
74                 <h5 class="card-title">NFTs</h5>
75                 <p class="card-text">List of last won NFTs</p>
76                 <button class="btn btn-primary" onclick="App.
                    showPrizes()">Won NFTs</button>
77                 <br>
78                 <br>
79                 <div id="prizes"></div>
80             </div>
81         </div>
82         <br>
83         <br>
84     </div>
85 </div>
86 </div>
87 </div>
88
89
90 <!-- jQuery first, then Popper.js, then Bootstrap JS -->
91 <script src="https://code.jquery.com/jquery-3.3.1.min.js"></script>
92 <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js
    /1.14.3/umd/popper.min.js" integrity="sha384-ZMP7rVo3mIykV+2+9
    J3UJ46jBkOWLaUAdn689aCwoqbBJiSnjAK/l8WvCWPIpM49" crossorigin="
    anonymous"></script>
93 <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.1.3/js/
    bootstrap.min.js" integrity="sha384-ChfqqxuZUCnJSK3+
    MXmPNiY6ZbWh2IMqE241rYiqJxyMiZ6OW/JmZQ5stwEULTy" crossorigin="
    anonymous"></script>
94
95 <!-- Web3 -->
96 <script src="./dist/web3.min.js"></script>
97 <script src="./dist/truffle-contract.js"></script>
98 <!-- App -->
99 <script src="./js/app.js"></script>
100
101
102 </body>
103 </html>

```

## 2.4 nftList.html

```

1 <!DOCTYPE html>
2 <html>
3 <head>
4     <meta charset="utf-8" />
5     <meta http-equiv="X-UA-Compatible" content="IE=edge">
6     <meta name="viewport" content="width=device-width, initial-scale=1"
    >

```

```

7
8     <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/
bootstrap/4.1.3/css/bootstrap.min.css" integrity="sha384-MCw98/
SFnGE8fJT3GXwEOngsV7Zt27NXFoaoApmYm81iuXoPkF0JwJ8ERdknLPM0"
crossorigin="anonymous">
9
10     <title>TRY!</title>
11 </head>
12 <body>
13     <nav class="navbar navbar-dark bg-dark">
14         <a class="navbar-brand mb-0 h1" href="/index.html">TRY -
Lottery</a>
15         <span class="navbar-text" id="accountId">
Account:
16         </span>
17     </nav>
18     <div class="container" style="background-color:#f5f5f5">
19         <div class="row" style="background-color: #f5f5f5;">
20             <div class="col-lg-2">
21                 <br>
22                 <br>
23                 <br>
24                 <br>
25                 <h6 id="currentBlock">Current Block:</h6>
26                 <h6 id="closingBlock">Closing Block:</h6>
27                 <h6 id="roundStartBlock">Starting Block:</h6>
28             </div>
29             <div id="mainUI" class="col-lg-9">
30                 <h1 class="text-center">NFT User Storage</h1>
31                 <div class="card text-center">
32                     <div class="card-body">
33                         <h5 class="card-title">NFTs</h5>
34                         <p class="card-text">List of won NFTs</p>
35                         <div id="allPrizes"></div>
36                     </div>
37                 </div>
38             </div>
39             <br>
40         </div>
41     </div>
42 </div>
43
44
45 <!-- jQuery first, then Popper.js, then Bootstrap JS -->
46 <script src="https://code.jquery.com/jquery-3.3.1.min.js"></script>
47 <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js
/1.14.3/umd/popper.min.js" integrity="sha384-ZMP7rVo3mIykV+2+9
J3UJ46jBk0WLaUAdn689aCwoqbbJiSnjAK/18WvCWPIpM49" crossorigin="
anonymous"></script>
48 <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.1.3/js/

```

```

bootstrap.min.js" integrity="sha384-ChfqqxuZUCnJSK3+
MXmPNlY6ZbWh2IMqE241rYiqJxyMiZ6OW/JmZQ5stwEULTy" crossorigin="
anonymous"></script>
49
50 <!-- Web3 -->
51 <script src="./dist/web3.min.js"></script>
52 <script src="./dist/truffle-contract.js"></script>
53 <!-- App -->
54 <script src="./js/app.js"></script>
55
56
57 </body>
58 </html>

```

## 2.5 lotteryClosed.html

```

1 <!DOCTYPE html>
2 <html>
3 <head>
4   <meta charset="utf-8" />
5   <meta http-equiv="X-UA-Compatible" content="IE=edge">
6   <meta name="viewport" content="width=device-width, initial-scale=1"
7     >
8   <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/
9     bootstrap/4.1.3/css/bootstrap.min.css" integrity="sha384-MCw98/
10     SFnGE8fJT3GXwEOngsV7Zt27NXFoaoApmYm81iuXoPkF0JwJ8ERdknLPM0 "
11     crossorigin="anonymous">
12
13   <title>TRY!</title>
14 </head>
15 <body>
16   <nav class="navbar navbar-dark bg-dark">
17     <a class="navbar-brand mb-0 h1" href="/index.html">TRY - Lottery</a
18     >
19     <span class="navbar-text" id="accountId">
20       Account:
21     </span>
22 </nav>
23   <div class="container" style="background-color:#f5f5f5" >
24     <div class="row" style="background-color: #f5f5f5">
25       <div id="mainUI" class="col-lg-12">
26         <div class="jumbotron text-center">
27           <h1 class="display-4">TRY - Lottery!</h1>
28           <p class="lead">Lottery it's currently closed!
29             Please wait for a lottery operator to open a new
30             lottery.</p>
31           <hr class="my-4">
32           <p>Please do not try to interact with the contract,

```



```

        each operation won't work and you will pay Gas
        to execute them!</p>
27     <p class="lead">
28         <a class="btn btn-primary btn-lg" href="/" role="
            button">Homepage</a>
29     </p>
30 </div>
31 </div>
32 </div>
33 <div id="eventId"></div>
34 </div>
35 </div>
36 </div>
37 </div>
38
39
40 <!-- jQuery first, then Popper.js, then Bootstrap JS -->
41 <script src="https://code.jquery.com/jquery-3.3.1.min.js"></script>
42 <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js
    /1.14.3/umd/popper.min.js" integrity="sha384-ZMP7rVo3mIykV+2+9
    J3UJ46jBkOWLaUAdn689aCwoqbBJiSnjAK/l8WvCWPIpM49" crossorigin="
    anonymous"></script>
43 <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.1.3/js/
    bootstrap.min.js" integrity="sha384-ChfqqxuZUCnJSK3+
    MXmPNIyE6ZbWh2IMqE241rYiqJxyMiZ6OW/JmZQ5stwEULTy" crossorigin="
    anonymous"></script>
44
45 <!-- Web3 -->
46 <script src="./dist/web3.min.js"></script>
47 <script src="./dist/truffle-contract.js"></script>
48 <!-- App -->
49
50
51 </body>
52 </html>

```