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DAFTAR LAMPIRAN

Lampiran 1. Source Code *Smart contract*

```
// SPDX-License-Identifier: GPL-3.0

pragma solidity >=0.7.0 <0.9.0;

contract EduID {

    struct Student{
        string student_name;
        uint256 student_identification;
        string class;
        uint256 timeStamp;
    }

    struct Grades{
        string subject;
        string student_grade;
        uint256 timeStamp;
    }

    mapping(uint256 => Grades[]) public _getstudentgrade;
    mapping(uint256 => Student) public _student;

    // function to add Student to blockchain
    function addStudent(uint256 _id , string memory _name, string memory _class)
    public {
        _student[_id].student_name = _name;
        _student[_id].student_identification = _id;
        _student[_id].class = _class;
        _student[_id].timeStamp = block.timestamp;
    }

    // function to add student grate to blockchain
    function addGrade(uint256 _id, string memory _subject, string memory grade)
    public {
        _getstudentgrade[_id].push(Grades(_subject , grade, block.timestamp));
    }

    // functin to fetch students' grade using students IDE number as input
    function getAllGrade(uint256 _id) public view returns (Student memory, Grades[]
    memory) {
        return (_student[_id], _getstudentgrade[_id]);
    }
}
```

Lampiran 2 Source Code Tambah Siswa Modal (with Web3)

```
<!DOCTYPE html>
<html lang="en">
<head>
```

```

<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<script src="https://cdn.jsdelivr.net/gh/ethereum/web3.js@1.0.0-
beta.36/dist/web3.min.js" integrity="sha256-
nWBTbvXhJgjslRyuAKJHK+XcZPICnmIAAMixz6EefVk="
crossorigin="anonymous"></script>
</head>
<body>
  <form action="/siswa/tambah_siswa" method="post" >
    <input type="hidden" name="adminId" value="<%= admin._id %>"/>
    <input type="hidden" name="kelasId" value="<%= dataKelas._id %>"/>
    <input type="hidden" name="namaKelas" id="namaKelas" value="<%=
dataKelas.nama %>"/>
    <div class="pt-5 px-9">
      <div class="border border-gray-300 rounded-lg px-9 py-7">
        <div class="mb-3 mr-5 pb-4">
          <h1 class="text-text_lg font-medium">Tambah Siswa</h1>
        </div>
        <div class="mb-3 mr-5">
          <label for="nama_siswa" class="block text-text_sm font-medium">Nama
Siswa</label>
          <input type="text" placeholder="Input nama siswa" name="namaSiswa"
id="namaSiswa" class="h-11 w-96 rounded-lg ring-gray-300 focus:ring-primary-600"
required>
        </div>
        <div class="mb-3 mr-5 pt-5">
          <label for="NISN" class="block text-text_sm font-
medium">NISN</label>
          <input type="text" placeholder="Input NISN siswa" name="nisn"
id="nisn" class="h-11 w-96 rounded-lg ring-gray-300 focus:ring-primary-600"
required>
          <p id="helper-text-explanation" class="mt-0.5 text-text_sm text-gray-500
dark:text-gray-400">NISN berupa angka</p>
        </div>
        <div onclick=" conn() " >
          <a class="bg-primary-600 text-white text-text_md rounded-lg text-center
inline-flex items-center px-5 py-3">Simpan di Blockchain</a>
        </div>
        <div id="second" class="pt-5 px-9 flex justify-end">
          <button type="submit" class="bg-primary-600 text-white text-text_md
rounded-lg text-center inline-flex items-center px-5 py-3">Tambah</button>
        </div>
      </div>
    </div>
  </form>

<script>

// initiate connection to blockchain using metamask, checking if browser already
installed metamask
window.addEventListener('load', async () => {
  console.log("hi");

```

```

if (window.ethereum) {
  console.log("hi");
  window.web3 = new Web3(ethereum);
  try {
    await ethereum.enable();
  } catch (error) {
  }
}
else if (window.web3) {
  window.web3 = new Web3(web3.currentProvider);
}

// Non-dapp browsers...
else {
  alert("please install metamask")
}
})

function add(){
  console.log("add in blockchain");
}

// initiate transaction
async function conn(){
  var accounts = await window.web3.eth.getAccounts();
  console.log("account is ",accounts[0]);

  var abi =
[{"inputs":[{"internalType":"uint256","name":"","type":"uint256"},{"internalType":"uint256","name":"","type":"uint256"}],"name":"_getstudentgrade","outputs":[{"internalType":"string","name":"subject","type":"string"},{"internalType":"string","name":"student_grade","type":"string"},{"internalType":"uint256","name":"timeStamp","type":"uint256"}],"stateMutability":"view","type":"function"},{"inputs":[{"internalType":"uint256","name":"","type":"uint256"}],"name":"_student","outputs":[{"internalType":"string","name":"student_name","type":"string"},{"internalType":"uint256","name":"student_identification","type":"uint256"},{"internalType":"string","name":"class","type":"string"},{"internalType":"uint256","name":"timeStamp","type":"uint256"}],"stateMutability":"view","type":"function"},{"inputs":[{"internalType":"uint256","name":"_id","type":"uint256"},{"internalType":"string","name":"_subject","type":"string"},{"internalType":"string","name":"grade","type":"string"}],"name":"addGrade","outputs":[],"stateMutability":"nonpayable","type":"function"},{"inputs":[{"internalType":"uint256","name":"_id","type":"uint256"},{"internalType":"string","name":"_name","type":"string"},{"internalType":"string","name":"_class","type":"string"}],"name":"addStudent","outputs":[],"stateMutability":"nonpayable","type":"function"},{"inputs":[{"internalType":"uint256","name":"_id","type":"uint256"}],"name":"getAllGrade","outputs":[{"components":[{"internalType":"string","name":"student_name","type":"string"},{"internalType":"uint256","name":"student_identification","type":"uint256"},{"internalType":"string","name":"class","type":"string"},{"internalType":"uint256","name":"timeStamp","type":"uint256"}],"internalType":"struct EduID.Student","name":"","type":"tuple"},{"components":[{"internalType":"string","name":"subject","type":"string"},{"internalType":"string","name":"student_grade","type":"string"},{"internalType":"uint256","name":"timeStamp","type":"uint256"}],"internalType":"struct

```

```

EduID.Grades[]", "name": "", "type": "tuple[]"], "stateMutability": "view", "type": "function"}]

var contract_address= '0xaE520C9D1b042AAC1045304a4566B586bABc2FEed';

var instance = new web3.eth.Contract(
  abi,
  contract_address
);

var name = document.getElementById("namaSiswa").value;
var id = document.getElementById("nisn").value;
var kelas = document.getElementById("namaKelas").value;

console.log(name , id);
await instance.methods.addStudent(id, name, kelas)
  .send({ from: accounts[0]})
  .then(()=>{
    document.getElementById('second').onclick = add() })
}
</script>
</body>
</html>

```

Lampiran 3 Source Code Tambah Nilai Siswa Modal (with Web3)

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <script src="https://cdn.jsdelivr.net/gh/ethereum/web3.js@1.0.0-beta.36/dist/web3.min.js" integrity="sha256-nWBTbvXhJgjslRyuAKJHK+XcZPICnmIAAMixz6EefVk="
crossorigin="anonymous"></script>
  <title>Document</title>
</head>
<body>
  <form action="/siswa/tambahNilai" method="post">
    <input type="hidden" name="adminId" value="<%= admin._id %>"/>
    <input type="hidden" name="siswaId" value="<%= siswa._id %>"/>
    <input type="hidden" name="kelasId" value="<%= dataKelas._id %>"/>
    <input type="hidden" name="matpelId" value="<%= selectedMatPel._id %>"/>
    <div class="pt-5 px-9">
      <div class="border border-gray-300 rounded-lg px-9 py-7">
        <div class="mb-3 mr-5 pb-4">
          <h1 class="text-text_lg font-medium">Tambah Nilai Siswa</h1>
        </div>
        <div class="mb-3 mr-5">
          <label for="nama_siswa" class="block text-text_sm font-medium">Nama
Siswa</label>

```

```

        <input type="text" placeholder="Input nama siswa" name="namaSiswa"
id="namaSiswa" class="h-11 w-96 rounded-lg ring-gray-200 focus:ring-primary-600
bg-gray-100" value="<%= siswa.namaSiswa %>" disabled>
    </div>
    <div class="mb-3 mr-5 pt-5">
        <label for="NISN" class="block text-text_sm font-
medium">NISN</label>
        <input type="text" placeholder="Input NISN siswa" name="nisn"
id="nisn" class="h-11 w-96 rounded-lg ring-gray-200 focus:ring-primary-600 bg-gray-
100" value="<%= siswa.nisn %>" disabled>
    </div>
    <div class="mb-3 mr-5 pt-5">
        <label for="NISN" class="block text-text_sm font-medium">Mata
Pelajaran</label>
        <input type="text" placeholder="Input NISN siswa" name="nisn"
id="mataPelajaran" class="h-11 w-96 rounded-lg ring-gray-200 focus:ring-primary-
600 bg-gray-100" value="<%= selectedMatPel.namaMataPelajaran %>" disabled>
    </div>
    <div class="mb-3 mr-5 pt-5">
        <label for="nilai" class="block text-text_sm font-medium">Nilai</label>
        <input type="text" placeholder="Input nilai siswa" name="nilai"
id="nilai" class="h-11 w-96 rounded-lg ring-gray-300 focus:ring-primary-600"
required>
    </div>
    <div onclick=" conn() " >
        <a class="bg-primary-600 text-white text-text_md rounded-lg text-center
inline-flex items-center px-5 py-3">Simpan di Blockchain</a>
    </div>
    <div id="second" class="pt-5 px-9 flex justify-end">
        <button type="submit" class="bg-primary-600 text-white text-text_md
rounded-lg text-center inline-flex items-center px-5 py-3">Tambah Nilai</button>
    </div>
</div>
</div>
</form>
<script>

// initiate connection to blockchain using metamask, checking if browser already
installed metamask
window.addEventListener('load', async () => {
    console.log("hi");
    if (window.ethereum) {
        console.log("hii");
        window.web3 = new Web3(ethereum);
        try {
            await ethereum.enable();
        } catch (error) {
            // User denied account access...
        }
    }
    // Legacy dapp browsers...
    else if (window.web3) {
        window.web3 = new Web3(web3.currentProvider);
    }
}

```

```

    // Accounts always exposed
    // web3.eth.sendTransaction({/* ... */});
  }
  // Non-dapp browsers...
  else {
    alert("please install metamask")
    console.log('Non-Ethereum browser detected. You should consider trying
MetaMask!');
  }
})

function add(){
  console.log("add in blockchain")
}

async function conn() {
  // window.web3 = new Web3(ethereum);
  // await ethereum.enable();

  var accounts = await window.web3.eth.getAccounts();
  console.log("account is ",accounts[0]);

  var abi =
[{"inputs":[{"internalType":"uint256","name":"","type":"uint256"},{"internalType":"u
int256","name":"","type":"uint256"}],"name":"_getstudentgrade","outputs":[{"internal
Type":"string","name":"subject","type":"string"},{"internalType":"string","name":"stu
dent_grade","type":"string"},{"internalType":"uint256","name":"timeStamp","type":"u
int256"}],"stateMutability":"view","type":"function"},{"inputs":[{"internalType":"uint
256","name":"","type":"uint256"}],"name":"_student","outputs":[{"internalType":"stri
ng","name":"student_name","type":"string"},{"internalType":"uint256","name":"stude
nt_identification","type":"uint256"},{"internalType":"string","name":"class","type":"st
ring"},{"internalType":"uint256","name":"timeStamp","type":"uint256"}],"stateMutab
ility":"view","type":"function"},{"inputs":[{"internalType":"uint256","name":"_id","ty
pe":"uint256"},{"internalType":"string","name":"_subject","type":"string"},{"internal
Type":"string","name":"grade","type":"string"}],"name":"addGrade","outputs":[],"state
Mutability":"nonpayable","type":"function"},{"inputs":[{"internalType":"uint256","na
me":"_id","type":"uint256"},{"internalType":"string","name":"_name","type":"string"
},{"internalType":"string","name":"_class","type":"string"}],"name":"addStudent","out
puts":[],"stateMutability":"nonpayable","type":"function"},{"inputs":[{"internalType":
"uint256","name":"_id","type":"uint256"}],"name":"getAllGrade","outputs":[{"compone
nts":[{"internalType":"string","name":"student_name","type":"string"},{"internalTy
pe":"uint256","name":"student_identification","type":"uint256"},{"internalType":"stri
ng","name":"class","type":"string"},{"internalType":"uint256","name":"timeStamp","t
ype":"uint256"}],"internalType":"struct
EduID.Student","name":"","type":"tuple"},{"components":[{"internalType":"string","n
ame":"subject","type":"string"},{"internalType":"string","name":"student_grade","type
":"string"},{"internalType":"uint256","name":"timeStamp","type":"uint256"}],"interna
lType":"struct
EduID.Grades[]","name":"","type":"tuple[]"}],"stateMutability":"view","type":"functio
n"}]

  var contract_address= '0xaE520C9D1b042AAC1045304a4566B586bABc2FEEd';

```



```

var instance = new web3.eth.Contract(
  abi,
  contract_address
);
var id = document.getElementById("nisn").value;
var subject = document.getElementById("mataPelajaran").value;
var score = document.getElementById("nilai").value;

await instance.methods.addGrade( id, subject, score)
  .send({from: accounts[0]})
  .then(()=>{
    document.getElementById('second').onclick = add() })
}
</script>
</body>
</html>

```

Lampiran 4 Source Code Data Sharing Dashboard (with Web3)

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <script src="https://cdn.jsdelivr.net/gh/ethereum/web3.js@1.0.0-beta.36/dist/web3.min.js" integrity="sha256-nWBTbvXHjgjslRyuAKJHK+XcZPICnmIAAMixz6EefVk="
  crossorigin="anonymous"></script>
  <title>Document</title>
</head>
<body>
  <aside>
    <div class="w-64 h-full shadow-md bg-primary-900 absolute text-white"
    id="sidenavSecExample">
      <div class="pt-8 pb-6 px-6">
        <div class="flex items-center">
          <div class="shrink-0">
            
          </div>
          <div class="grow ml-3">
            <p class="text-text_lg font-semibold text-white">Untitled UI
            </p>
          </div>
        </div>
      </div>
    </div>
    <ul class="relative px-4">
      <div class="flex justify-center">
        <div class="mb-3 xl:w-52">

```

```

        <div class="input-group relative flex flex-wrap items-stretch w-full mb-4
rounded-lg">
            <input type="search" class="form-control relative flex-auto min-w-0
block w-full px-3 py-1.5 text-base font-normal text-text-base bg-white bg-clip-padding
border border-solid border-gray-300 rounded transition ease-in-out m-0 focus:text-
white focus:bg-white focus:border-primary-600 focus:outline-none"
placeholder="Search" aria-label="Search" aria-describedby="button-addon2">
            </div>
        </div>
    </div>
    <div class="">
        <ul class="relative">
            <li class="relative">
                <a class="flex items-center text-sm py-4 px-6 h-16 text-white text-
ellipsis whitespace-nowrap rounded hover:text-gray-900 hover:bg-primary-700
transition duration-300 ease-in-out" href="/main/<%= admin._id %>" data-mdb-
ripple="true" data-mdb-ripple-color="dark">
                    
                    <span>Dashboard</span>
                </a>
            </li>
            <li class="relative">
                <a class="flex items-center text-sm py-4 px-6 h-16 text-white text-
ellipsis whitespace-nowrap rounded hover:text-gray-900 hover:bg-primary-700
transition duration-300 ease-in-out" data-mdb-ripple="true" data-mdb-ripple-
color="dark" href="/kurikulum/<%= admin._id %>">
                    
                    <span>Kurikulum</span>
                </a>
            </li>
            <li class="relative">
                <a class="flex items-center text-sm py-4 px-6 h-16 text-white text-
ellipsis whitespace-nowrap rounded hover:text-gray-900 hover:bg-primary-700
transition duration-300 ease-in-out" href="/siswa/<%= admin._id %>" data-mdb-
ripple="true" data-mdb-ripple-color="dark">
                    
                    <span>Nilai Siswa</span>
                </a>
            </li>
            <li class="relative">
                <a class="flex items-center text-sm py-4 px-6 h-16 text-white text-
ellipsis whitespace-nowrap rounded hover:text-gray-900 hover:bg-primary-700
transition duration-300 ease-in-out" href="/data_sharing/<%= admin._id %>" data-
mdb-ripple="true" data-mdb-ripple-color="dark">
                    
                    <span>Data Sharing</span>
                </a>
            </li>
        </ul>
    </div>
    <div class="text-center bottom-0 absolute w-full">
        <div class="px-4">

```

```

        <a class="flex items-center text-sm py-4 px-6 h-16 text-white text-ellipsis
whitespace-nowrap rounded hover:text-gray-900 hover:bg-primary-700 transition
duration-300 ease-in-out" href="#" data-mdb-ripple="true" data-mdb-ripple-
color="dark">
            
            <span>Settings</span>
        </a>
    </div>
    <div>
        <div class="flex items-center px-6 before:flex-1 before:border-t
before:border-gray-500 before:mt-0.5 after:flex-1 after:border-t after:border-gray-500
after:mt-0.5"></div>
    </div>
</div>
</div>
</aside>

<main class="flex-1 ml-64 overflow-y-scroll max-h-screen">
    <div class="pt-12 pl-9 flex">
        <div>
            <h1 class="text-display_sm font-medium">Data Sharing</h1>
            <p class="text-text_md font-regular text-gray-500">Berbagi data siswa
dengan aman menggunakan blockchain</p>
        </div>
    </div>

    <div class="pt-5 pl-9 flex">
        <div class="mb-3 mr-5">
            <label for="nama_siswa" class="block text-text_sm font-medium">Cari
NISN</label>
            <input type="text" placeholder="Input NISN" name="nisn" id="nisn"
class="h-11 w-96 rounded-lg ring-gray-300 focus:ring-primary-600" required>
        </div>
        <div class="mb-3 px-5 pt-4">
            <div onclick="conn()">
                <a class="bg-primary-600 text-white text-text_md rounded-lg text-center
inline-flex items-center px-5 py-3">Cari Data</a>
            </div>
        </div>
    </div>

    <div class="flex items-start pl-9 pt-5">
        <div class="p-5 w-72 mr-14 border border-gray-200 shadow-md rounded-lg
student-data">

            </div>
            <div class="pr-14 pb-10 w-full">
                <div class="overflow-x-auto relative shadow-md sm:rounded-lg">
                    <table class="w-full text-sm text-left text-gray-500">
                        <caption class="p-5 font-semibold text-text-base bg-white">
                            <div class="flex items-center">
                                <h1 class="text-left flex-1">Daftar Nilai</h1>

```

```

        </div>
    </caption>
    <thead class="text-text_sm font-medium text-gray-500 bg-gray-50">
        <tr>
            <th scope="col" class="py-3 px-6">
                Mata Pelajaran
            </th>
            <th scope="col" class="py-3 px-6">
                Nilai
            </th>
            <th scope="col" class="py-3 px-6">
                Date Uploaded
            </th>
        </tr>
    </thead>
    <tbody class="nilai-table">
        <tr class="bg-white border-b ">
        </tr>
    </tbody>
</table>
</div>
</div>
</div>

</main>

<script>
    let blockchainData = []
    const nilaiTable = document.querySelector('.nilai-table')
    const studentData = document.querySelector('.student-data')

    function getTimestamp(timestamp) {
        const date = new Date(timestamp * 1000);

        return date
    }

    // initiate connection to blockchain using metamask, checking if browser already
    installed metamask
    window.addEventListener('load', async () => {
        if (window.ethereum) {
            window.web3 = new Web3(ethereum);
            try {
                await ethereum.enable();
            } catch (error) {
                // User denied account access...
            }
        }
        // Legacy dapp browsers...
        else if (window.web3) {
            window.web3 = new Web3(web3.currentProvider);
            // Accounts always exposed
            // web3.eth.sendTransaction({/* ... */});

```

```

    }
    // Non-dapp browsers...
    else {
        alert("please install Non-Ethereum browser detected. You should consider
trying MetaMask!")
    }
})

function add(){
    console.log("add in blockchain");
}

async function conn(){
    var accounts = await window.web3.eth.getAccounts();
    console.log("account is " ,accounts[0]);

    var abi =
[{"inputs":[{"internalType":"uint256","name":"","type":"uint256"},{"internalType":"u
int256","name":"","type":"uint256"}],"name":"_getstudentgrade","outputs":[{"internal
Type":"string","name":"subject","type":"string"},{"internalType":"string","name":"stu
dent_grade","type":"string"},{"internalType":"uint256","name":"timeStamp","type":"u
int256"}],"stateMutability":"view","type":"function"},{"inputs":[{"internalType":"uint
256","name":"","type":"uint256"}],"name":"_student","outputs":[{"internalType":"stri
ng","name":"student_name","type":"string"},{"internalType":"uint256","name":"stude
nt_identification","type":"uint256"},{"internalType":"string","name":"class","type":"st
ring"},{"internalType":"uint256","name":"timeStamp","type":"uint256"}],"stateMutab
ility":"view","type":"function"},{"inputs":[{"internalType":"uint256","name":"_id","ty
pe":"uint256"},{"internalType":"string","name":"_subject","type":"string"},{"internal
Type":"string","name":"grade","type":"string"}],"name":"addGrade","outputs":[],"state
Mutability":"nonpayable","type":"function"},{"inputs":[{"internalType":"uint256","na
me":"_id","type":"uint256"},{"internalType":"string","name":"_name","type":"string"
},{"internalType":"string","name":"_class","type":"string"}],"name":"addStudent","out
puts":[],"stateMutability":"nonpayable","type":"function"},{"inputs":[{"internalType":
"uint256","name":"_id","type":"uint256"}],"name":"getAllGrade","outputs":[{"compo
nents":[{"internalType":"string","name":"student_name","type":"string"},{"internalTy
pe":"uint256","name":"student_identification","type":"uint256"},{"internalType":"stri
ng","name":"class","type":"string"},{"internalType":"uint256","name":"timeStamp","t
ype":"uint256"}],"internalType":"struct
EduID.Student","name":"","type":"tuple"},{"components":[{"internalType":"string","n
ame":"subject","type":"string"},{"internalType":"string","name":"student_grade","type
":"string"},{"internalType":"uint256","name":"timeStamp","type":"uint256"}],"interna
lType":"struct
EduID.Grades[]","name":"","type":"tuple[]"}],"stateMutability":"view","type":"functio
n"}]

    var contract_address=
'0xaE520C9D1b042AAC1045304a4566B586bABc2FEed';

    var instance = new web3.eth.Contract(
        abi,
        contract_address
    );

```

```

var nisp = document.getElementById("nisp").value;

await instance.methods.getAllGrade(nisp)
.call()
.then((res) => {
  nilaiTable.innerHTML = "
  studentData.innerHTML = "
  res[1].forEach((nilai) => {
    nilaiTable.innerHTML +=
      `<tr class="bg-white border-b ">
        <th scope="row" class="py-7 px-8 font-medium text-text-base
whitespace-nowrap">
          ${nilai[0]}
        </th>
        <td class="py-7 px-8 ">
          ${nilai[1]}
        </td>
        <td class="py-7 px-8 ">
          ${getTimestamp(nilai[2])}
        </td>
      </tr>`
  })
  console.log(res[0])
  studentData.innerHTML +=
    `<div class="pb-5">
      <h1 class="text-text_lg font-medium">Nama Siswa</h1>
      <p class="text-text_md font-regular">${res[0][0]}</p>
    </div>
    <div class="pb-5">
      <h1 class="text-text_lg font-medium">NISN</h1>
      <p class="text-text_md font-regular">${res[0][1]}</p>
    </div>
    <div class="pb-5">
      <h1 class="text-text_lg font-medium">Kelas</h1>
      <p class="text-text_md font-regular">${res[0][2]}</p>
    </div>`
  })
}
</script>
</body>
</html>

```

Lampiran 5 Data Hasil Uji Performa Blockchain

Txhash	Block Number	Total Transaction per Block	Mining Duration (s)	Throughput (Tx/s)
0x85320c368692197fcd2cbc2e3ac3882136a809843c1cf03fe1dcbe1ec6638cd4	8104764	7	12	0.58
0x76dd8d494ebea7efa40ace4031f51a22f48254f5a6aa1ada6df5d1e9619580d5	8104765	119	24	4.96
0xb861fa8e96b24eb19a3752961983a0cb87d35f670ae3536b408d5103b73ad9c4	8104806	111	12	9.25
0x189372f04fbc3c35cc3c93edb026f142b95f80d2b13c4f34cb7166ff3bc004f5	8104864	207	12	17.25
0x5f1402e94e849b10ec96e8c7c1dd0e04e2ea4287e41869a701a07ede93515123	8104864	207	12	17.25
0x26f94611a6e357ba3d7c7809791ae2a7f500e457276ca68a4564054bd44da23b	8104864	207	12	17.25
0xb4a8af322b359e2b6a9242ef7395c7c433115a65d579b2472de20ca8a5af2fb0	8104864	207	12	17.25
0x48f86c5ff5bb58b3b45e55fb95560dbc5f5dbd2aea3303610a055a47870ef8bff	8104864	207	12	17.25
0x9cb78594370c2096f369f9526f92950f1c4f01073187965a7867cdfddb1373fe	8104864	207	12	17.25
0xb83f5a0961543ac31e59cb91087d7b536a823e6f6aa6f8d72533e0b00d615f79	8104882	102	12	8.5
0xc714b94dc0b540880b7fb5547aa681cb4f2a84718bc78a529027f9181bace656	8104883	35	12	2.92
0xa8eb6bf719248a80bc2bbd3efb1f3e2078e80dfbf675ca1e12093f798defe7cd	8125505	49	12	4.08
0x69a988fc60e23a0a2cb8ea2d7ba488dbe2b112884b1c23fae1255aa28718b309	8125513	41	12	3.42
0x1c1014fa5f351dc0b8de858655090a1cf5be01e607bd360526158ca402db5200	8126061	88	12	7.33
0x9f708ea5e69bd56f0298f9f6edfa4cb82add4ad74a857f8dad599283abfaa1c7	8132008	130	24	5.42
0xfac556e68bedd2f4ba69e9946a53574a4c67c93095822991fe4a0804b9103ea3	8132554	66	12	5.5
0x31cd20f9063a2e02f2085f4fa81221cfe93dbaed583b84eebefb23f192378ec8	8132590	55	12	4.58
0x2c7340d7d88d6a36d227db754110c0d6e0de2fd64725c17125c52bdd4c02593b	8137737	72	12	6
0x1347ca031672a60f4d5513134fcabce626f218dc24b8d7a0fc99ed082e4168ad	8137749	53	12	4.42
0x0c3ca918047d24343cd5649222b3636d32a4bfe34c68723dd354227d3ebc7ade	8137803	98	24	4.08
0x51058a652efbaf60512608a941e37b249b70d14bdb37c988098c2b8405e0a5f8	8257024	101	12	8.42
0xe2989e2604ea9b3006c941249eae2c9d53ec8c764664caca44efd2ca48fc253a	8257024	101	12	8.42

0xc5634dcab207a7fa0290f25f6e4276c08912f77c7ace62863b6abfac4e410a53	8257024	101	12	8.42
0x807d42b30b315837a5a408f06af739e90e7003ff1f586497d45615f2b4763c7f	8372615	54	12	4.5
0xaffb17307782b1c14b577aa5f9bc5dd4d3508bd6ffa6bac983691a1bdf32df9c	8372650	51	12	4.25
0x306189e3c87211388315869dab31e38dde7257a4f38add2a99f88f1be3fc3133	8402058	89	12	7.42
0x0212eed592052e48cdc76515eb37ff9c4ce89c9a73d57608d640f06c0a7ee228	8415648	89	12	7.42
0xd2f2d6a530a140c3834a323d5d9e511ff3a607328ec3814d10f172a154cb73f6	8415648	89	12	7.42
0x36daa871381a4a101468398c4f6fd31477719afc0cdb5728c28d9074717646a7	8443415	185	36	5.14
0xc5229ccc5da8214f037a54965f3392d68119234f2cbab4586b53c43671e67aeb	8443415	185	36	5.14
AVERAGE		7	14.8	8.04

Lampiran 6 Data Hasil Uji Performa NoSQL Database (MongoDB)

Label	# Samples	Average	Min	Max	Error %	Throughput	Received KB/sec	Sent KB/sec
Insert to MongoDB	30	0.005	3	18	0.00%	33.26	0.55	0

Lampiran 7 Link Source Code

Source Code
https://github.com/deamalaha/eduid-skripsi-blockchain