

KIGALI INDEPENDENT UNIVERSITY ULK

COMPUTER SCIENCE DEPARTMENT

Y3/CS/D



INTERNET AND WEB
TECHNOLOGIES

CAT II

Student Number: 201810473

I. PROJECT TITLE

IMPLEMENTATION OF AN ONLINE E-VOTING SYSTEM

Technologies used: CSS, JavaScript, HTML, PHP, MySQL

II. PROJECT DESCRIPTION

II.1. WHICH PROBLEM?

Votes are everywhere in our nowadays society. Democratic elections are being done from basic organizations to states. Voting systems are implemented in a such way every participant for an organization or a citizen for a country are having the duty and the right to vote by expressing their opinion on a given problem by providing appropriate solution to the community or organization problems. This is not always the case in some situation obliging users (citizen or members of an organization) not to attend to voting process. Those situations can be illness, disabilities to leave a physical location, lack of time for voting, many people attending voting centers and so on. This may do somehow the voting system unfair because the participant in it did not fulfil their duties and rights.

Life have never been easier than today with the use of computer technologies. But is not always true when talking about voting systems. They still in archaic and lack of computing. The systems used in voting in Africa globally and in Rwanda particularly are using computing for important tasks such as register all voters of one country, all candidates and so on. This use of computers don't impact much more the end-users means the Voters its aims to help vote organizers manage the process.

II.2. Objectives

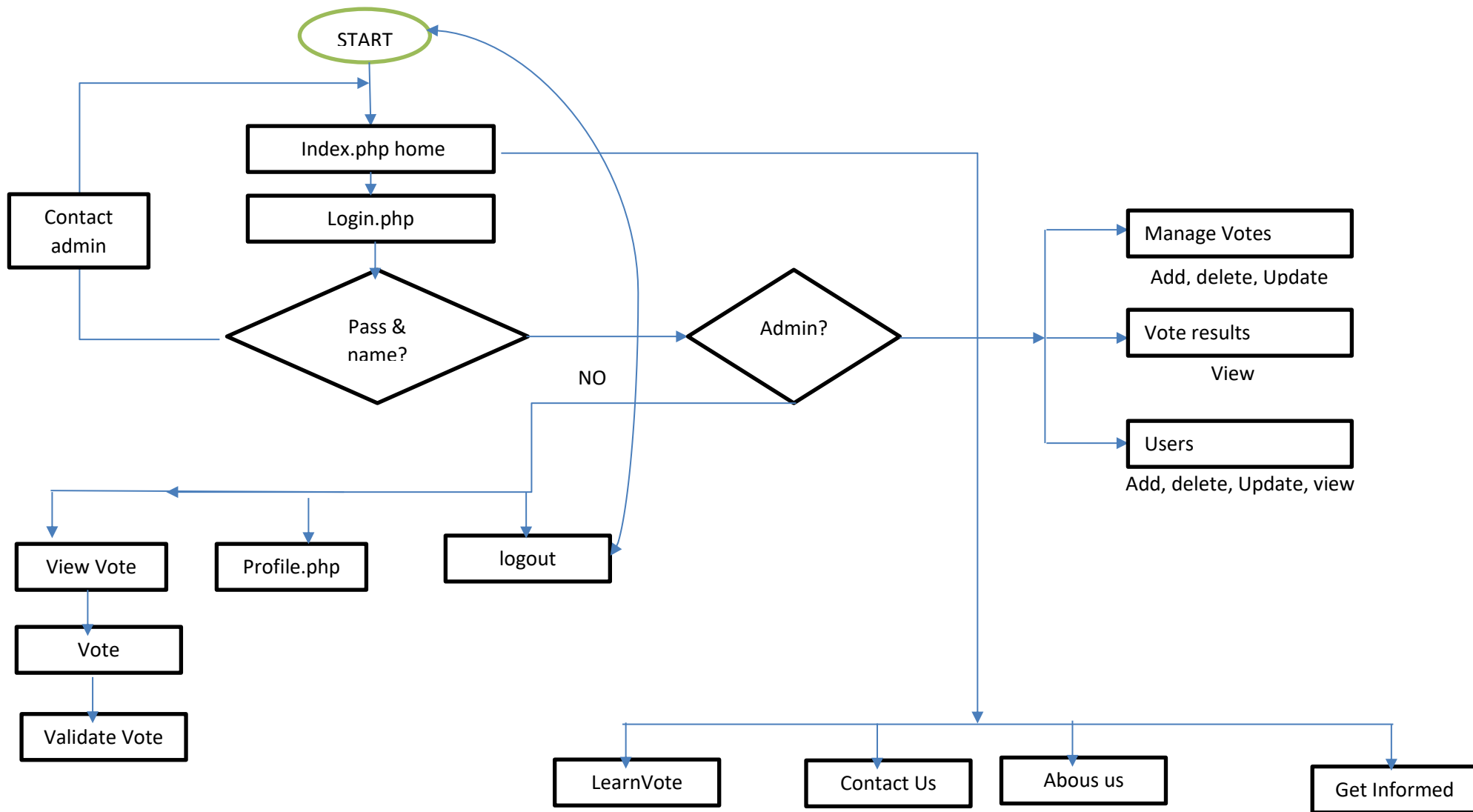
This work is following the objective of providing a fair web application for voting process, which will guarantee all voters to vote without having location limitations, availability and time lack. The system will provide a way for all users to vote from where they are, get informed about the voting process in which they are involved and finally participate to the democratic game of voting process.

The system should provide:

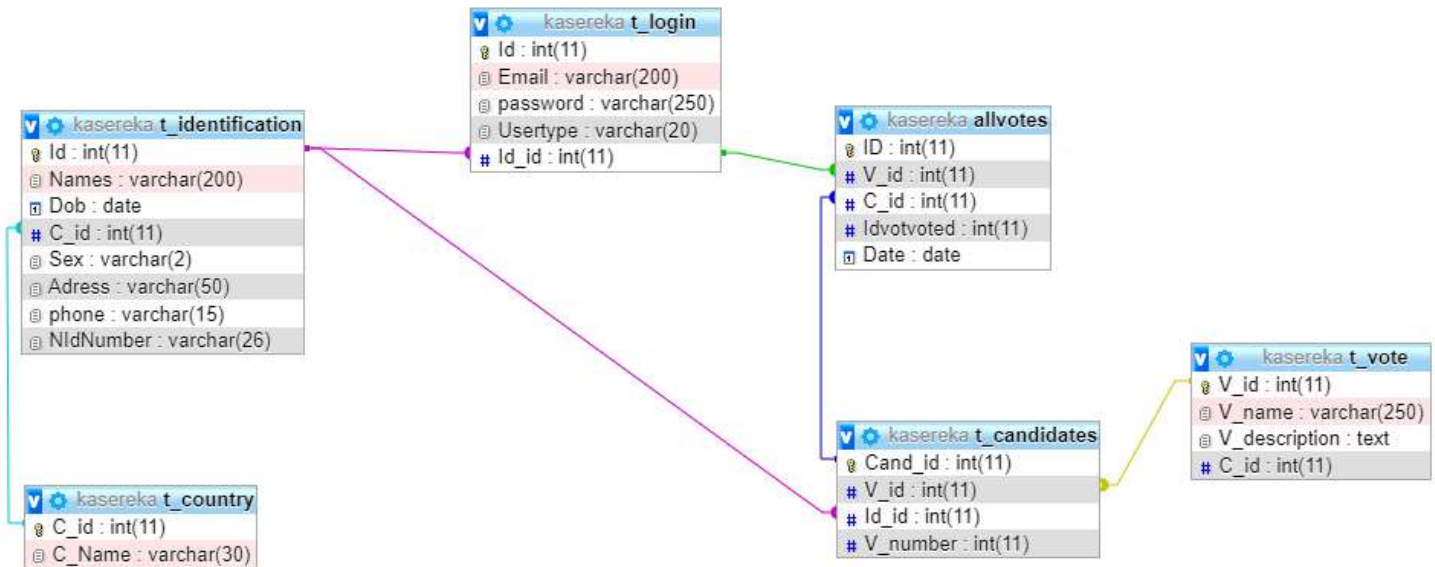
- A Portal to administrators to add new voting process for every vote and so to add among all users the only allowed to sit for that kind of vote.
- The way to add new users and keep in database users information, users participations and anonymously users vote.
- According to vote, the system will be responsible of keeping secret the identity of whom as voted for someone or another one but should identify and show all users participating to the voting process
- An information portal to help participant to be informed about the way to vote online, teaching them the techniques the civil rights, duties and all the regulations in terms of voting process
- A ballot counting for every vote passed online so the process should be automatic and help save in order to know the winner of the process.
- A dashboard to users and admin too, simply for user change and preview their vote before deadline and allow them to keep track on all activities they have been part.
- A manner to distinguish all users of the system from the participant to a given voting process and distinguish candidates from different voting processes.

III. PROJECT DESIGN

III.1. UI FLOW



III.2. DATABASE DESIGN



III.3. WEBSITE Structure

Here, am showing the tree of the whole project how its structured in terms of File and Folder

```
C:\
├── allYourVotes.php
├── ballot.php
├── index.php
├── login.php
├── votes.php
├── ---css
│   ├── login.css
│   └── style.css
├── ---images
│   ├── 1.png
│   └── favicon.png
├── ---inc
│   ├── banner.php
│   ├── db.php
│   ├── footer.php
│   ├── header.php
│   ├── logout.php
│   ├── menu.php
│   ├── ref.php
│   └── voting.php
├── ---js
├── layout
└── ---scripts
```

Css: grouping all of the style sheet of this website

Images: container for all images in the website

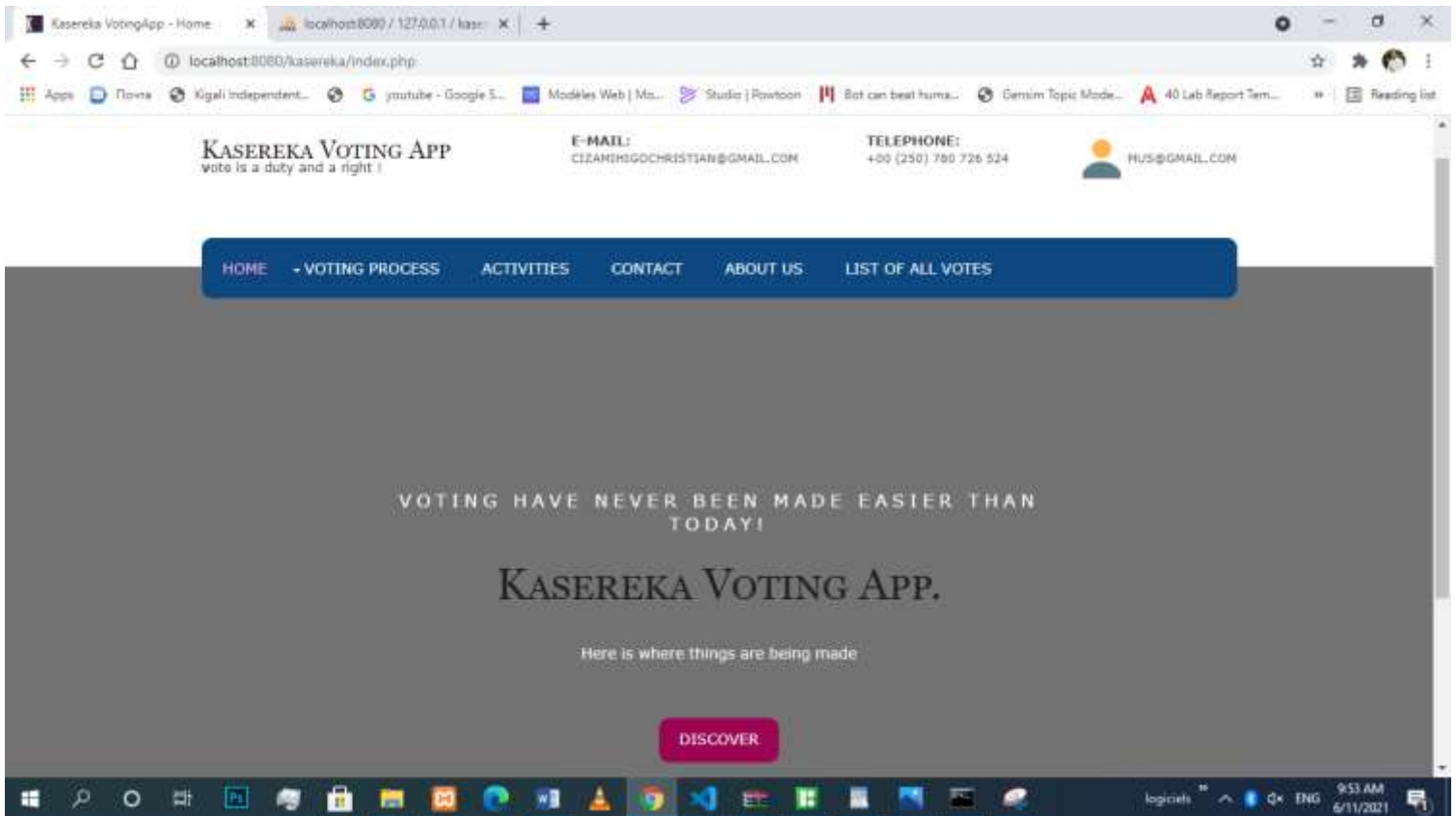
Inc: for including pages. Here the purpose was to do DRY (Don't Repeat Yourself) in grouping the most common of all pages in other php pages then after include them where necessary

Js: Javascripts files are listed here and are responsible of animations as we are going to bring them in code section.

And on the root we find all the other pages of our website

IV. IMPLEMENTATION SCREENSHOOT

1. Index.php



2. Login.php

A screenshot of the login form for the 'Kasereka Voting Application'. The form is white with a grey border. It contains two input fields: 'Email address' with the placeholder text 'Enter your Email' and 'Password' with the placeholder text 'Enter password'. Below the fields is a red 'Login' button. At the bottom, there are links for 'Create account' and 'Contact Commission'.A screenshot of the login form for the 'Kasereka Voting Application' with pre-filled data. The 'Email address' field contains 'mus@gmail.com' and the 'Password' field contains three asterisks '***'. The red 'Login' button is visible below the fields. At the bottom, there are links for 'Create account' and 'Contact Commission'.

3. Votes.php

If allowed to vote, a vote button is displayed if not the system informs you that the vote is another country so you can't vote for it.

Reform is easy to talk about, but difficult to bring about. Many of the suggested improvements, such as requiring voters to show ID at the polls, are bitterly opposed. For instance, Maria Cardona, spokeswoman for the Democratic National Committee, claims that "ballot security and preventing voter fraud are just code words for voter intimidation and suppression." Even improved technology is controversial. This November, around fifty million Americans will be using electronic voting machines similar to ATM machines, and some computer scientists are alarmed by the possibility that hackers could change the software to cast multiple votes or do other kinds of mischief. Both Democratic senator Hillary Clinton and GOP representative Steve King of Iowa are backing separate pieces of legislation to require that machines issue paper receipts for voters to verify before casting their ballots. But the legislation hasn't even had a hearing and only Nevada will have paper receipts in place by the fall 2004 election.

You are not allowed to vote here because you are from **Rwanda**

college vote, [Rwanda](#)

America's election problems go beyond the strapped budgets of many local election offices. More insidious are flawed voter rolls, voter ignorance, lackadaisical law enforcement and a shortage of trained volunteers. All this adds up to an open invitation for errors, miscounts or fraud



4. [ballot.php](#)

KASEREKA VOTING APP
vote is a duty and a right !

E-MAIL:
CIZAMIRSGOCHRISTIAN@GMAIL.COM

TELEPHONE:
+00 (250) 780 726 334

 MUS@GMAIL.COM

11 : MUS

Vote

You are one step ahead to finish this vote

You have Been Voting for
The Mail of the voter

college vote
mus@gmail.com

Confirm Your Vote

5. [Confirmation.php](#)

Your Vote Information

Your right was confidentially expressed. You have successfully voted for the candidate of your choice

college vote

On 06-11-21

Here are the changes you made:

You mus@gmail.com
has voted for Mus

Vote

After Vote

This is to preview your vote before registering it in the designed database

6. Allvotes.php

Here the user is able to be seeing a dash board of all the votes he has made.

The screenshot shows the top section of the Kasereka Voting App. At the top, there is a header with the app name "KASEREKA VOTING APP" and the tagline "vote is a duty and a right!". To the right of the header, there is contact information: "E-MAIL: CSEANRHOCHRISTIAN@GMAIL.COM" and "TELEPHONE: +90 (250) 198 726 824". Below the header, there is a navigation bar with links: "HOME", "VOTING PROCESS", "ACTIVITIES", "CONTACT", "ABOUT US", and "LIST OF ALL VOTES". Below the navigation bar, there is a table showing user information:

Candidate Id:	Mus
Vote Id:	Mus@gmail.com
Date Of Vote:	06-11-2020

7. Other Pages (Such as admin pages for CRUD Operation are design in the same way as our register page cause both are forms for storing and altering/ updating database element): The design is the same cause even register page in our system is an admin page. No user can register him self

8. Register.php profile.php

The screenshot shows the registration form for the Kasereka Voting App. The form has the following fields:

- First Name:
- Last Name:
- Email address:
- Password:
- Profile image: No file chosen

At the bottom of the form, there is a "Get started" button and a link "Already signed up? | Login".

The screenshot shows the profile form for the Kasereka Voting App. The form has the following fields:

- First Name:
- Last Name:
- Email address:
- Password:
- Profile image: events.sql

At the bottom of the form, there is a "Get started" button and a link "Already signed up? | Login".

V. CODE SAMPLE

Some PHP, HTML

Login.php

```
<div class="wrapper">
  <section class="form login">
    <header>Kasereka Voting Application</header>
    <form method="POST" action="login.php" enctype="multipart/form-data">
      <div class="error-txt">This is an error message</div>
      <div class="field input">
        <label>Email address</label>
        <input type="text" placeholder="Enter your Email" name="mail" >
      </div>
```

```

<div class="field input">
    <label>Password</label>
    <input type="password" placeholder="Enter password" name="pwd">

</div>
<div class="field button">
    <input type="submit" value="Login">
</div>
<div class="link">Create account <span id="Br-
line"></span> <a href="contact.php">Contact Commission</a></div>
<center><div><?php
    include("inc/db.php");

?>
<?php

    if(isset($_POST['mail']))
    {
        //$con =mysqli('localhost', 'root', '', 'kasereka');
        $name= $_POST['mail'];
        $pwd = $_POST['pwd'];
        $sql = "SELECT * FROM t_login WHERE Email = '". $name.'" AND passw
ord = '". $pwd.'" LIMIT 1; ";

        $result = mysqli_query($connect,$sql) ;//or die(mysql_error());
        $row = mysqli_num_rows($result);

        if($row > 0)
        {
            while ($data = mysqli_fetch_assoc($result))
            {
                session_start();
                $_SESSION['Name'] = $name;
                if($data['Usertype']== 'User')
                {

                    header("Location: index.php");
                }
                elseif($data['Usertype'] == 'Admin')
                {
                    header("Location: admin/index.php");
                }

            }

        }
        else{
            echo("\nno record found In our db");
        }
    }

```



```

        }

        ?>
    </div></center>

</form>
</section>

```

Ballot.php

```

<?php
$Page_Var= "Voting Ballot";
include("inc/header.php");
include_once("inc/db.php");

echo($_SESSION['VoteToVote']);

?>
<html>
    <head>
        <link rel="stylesheet" href="layout/styles/layout.css">
    </head>
    <p>
        <br>
        <br>
    </p>
    <center>
        <fieldset>
            <legend>Choose your Candidate</legend>
            <form action="" method="POST">

                <select name="vote" id="" >
                    <option value="" disabled>--Candidate--</option>
                    <?php
                        $rec = mysqli_query($connect, "SELECT t_candidates.Cand_id, t_candidates.V_number
, t_identification.Names FROM t_candidates, t_identification WHERE t_candidates.V_id = '".$_SESSION['VoteToVote']."' AND t_identification.Id = t_candidates.Id_id ORDER BY t_candidates.V_number;");
                    );
                    while( $data = mysqli_fetch_array($rec))
                    {
                        echo("<option value = ".$data['Cand_id']."' selected class='drop'>".$data['V_number']."' : ".$data['Names']."'</option>");
                    }
                ?>
            </select>
            <br>
            <button type="submit" name="S_vote">Vote</button>
        </form>
        <?php
            if(isset($_POST['S_vote']))
            {

```

```

        $sq = mysqli_query($connect, "SELECT * FROM t_vote WHERE V_id = '". $_SESSION['VoteToVote'] . "'");
        $vo = mysqli_fetch_array($sq);
        echo("You are one step a head to finish this vote");
        $_SESSION['CandVoted'] = $_POST['vote'];
        $_SESSION['VoteDate'] = date('m-d-y');
        $sql = mysqli_query($connect, "SELECT * FROM t_login WHERE Email = '". $_SESSION['Name'] . "'");
        $vol = mysqli_fetch_array($sql);
        $_SESSION['VoterId'] = $vol['Id_id'];
    }
    else {
    }?>

<br>
<table width="50%">
    <tr>
        <td>You have Been Voting for </td>
        <td><?php echo($vo["V_name"]);?></td>
    </tr>
    <tr>
        <td>The Mail of the voter</td>
        <td><?php echo $_SESSION['Name']?></td>
    </tr>
    <tr>
        <td colspan="2">

        </td></tr>
</table>
<a href="inc/voting.php">Confirm Your Vote</a>
</fieldset>
</center>
</html>

```

header.php

```

<body id="top">
<div class="wrapper row1">
    <header id="header" class="hoc clear">
        <div id="logo" class="fl_left">
            <h1><a href="index.php">Kasereka Voting App</a></h1>
            <p><strong>V</strong>ote is a duty and a right !</p>
        </div>
        <div id="quickinfo" class="fl_right">
            <ul class="nospace inline">
                <li><strong>E-mail:</strong><br>
                    cizamihigochristian@gmail.com</li>
                <li><strong>Telephone:</strong><br>
                    +00 (250) 780 726 524</li>
            </ul>
        </div>
    </header>
</div>

```

```

<?php
    //$_SESSION["Name"]="CIZA MIHIGO";
    if(isset($_SESSION["Name"]))
    {
        ?>
        <li><a href="inc/logout.php"><?= $_SESSION['Name']?></a></li>
        <?php
        }
        else
        {?>
        <?php // <input class="btn" type="button" value="S'insrire"?>
        <a href="login.php"><input class="btn" type="button" value="Se connecter"></a>
        <?php
        }
        ?>
    </ul>
</div>
</header>
<script src="layout/scripts/jquery.min.js"></script>
<script src="layout/scripts/jquery.backtotop.js"></script>

</div>
<?php include("menu.php");?>

```

Voting.php

```

<h2 style="text-align: center"><?= $vo["V_name"]?></h2>
<!--<div class="row">-->
    <div class="column">
        <div class="card">
            <div class="container">
                <h2>On <?= $_SESSION['VoteDate']?> </h2>
                <p class="title">Here are the changes you made:</p>
                <p><td>You <?php echo($_SESSION['Name']);?>, <br> has voted for <?php echo($vol['
Names']);?> </td></p>
                <p><form action="" method="post"><button class="button" name="b_vote" >Vote</butt
on> | <button class="button1">Alter Vote</button></form></p>
            </div>
        </div>
    </div>

    <?php
    if(isset($_POST['b_vote']))
    {
        $sqr = mysqli_query($sql,"INSERT INTO allvotes(V_id, C_id, Idvotvoted, Date) VALUES('
".$_SESSION['VoterId']. "','".$_SESSION['CandVoted']. "','".$_SESSION['VoteToVote']. "','".$_SESSI
ON['VoteDate']. "' ) ");
    }

```

```

        if($sqr)
        {
            echo("<script>alert('You have voted');</script>");
            header("Location:../index.php");
        }
    }
?>

```

SOME CSS and JavaScript code

```

jQuery("#backtotop").click(function () {
    jQuery("body,html").animate({
        scrollTop: 0
    }, 600);
});
jQuery(window).scroll(function () {
    if (jQuery(window).scrollTop() > 150) {
        jQuery("#backtotop").addClass("visible");
    } else {
        jQuery("#backtotop").removeClass("visible");
    }
});

```

```

body {
    color: #ffffff;
    font-size: 15px;
    font-family: 'Open Sans', sans-serif;
    line-height: 30px;
}
#menu {
    background-color: rgba(28, 43, 75, 1);
    color: #fff;
    font-size: 12px;
    font-weight: 900;
    letter-spacing: 1px;
    min-height: 70px;
    margin-left: 1px;
}

.navbar {
    position: relative;
    min-height: 50px;
    margin-bottom: 20px;
    border: 1px solid transparent;
    text-align: center;
}

```

```

a {
    color: #ffffff;
    text-decoration: none !important;
    outline: none !important;
}
ul, li, ol{
    margin: 0 10px;
    list-style: none;
    padding: 0px;
    display: inline-block;
}
#footer {
    padding: 5px 20px;
    background-color: #2d3d5a;
    text-align: right;
    color: #fff;
    font-size: 15px;
    position: fixed;
    width: 100%;
    height: 40px;
    bottom: 0;
}

```

VI. RECOMMENDATION

Studying the module of Internet and Web technologies was of a great importance to us because it helped us working on real life problems and we tried as we could resolving the problems that we identified.

Even if the proposes solutions are able to solve the problem, this is not always accurate in a certain period of time when more data should be handled by the system, more users, more votes and increasing category of votes to be organized. The responsibility, which is ours, after receiving the tools from this module, is to continue designing the system so it can be as good as our expectations.

In Coming future, the system should be implemented in a such way a user may not vote after time provided for voting. It should also take into consideration that For voting systems many information should gathered together so to make the system not just enter basic information.