IMS Engineering College, Ghaziabad

Mini Project on
"Online Voting System"

Subject Name: Mini project

Subject Code: KCS-554

COURSE: B.Tech
SEMESTER: 5th

by

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Submitted to:
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Department of Computer Science
IMS ENGINEERING COLLEGE
NH-09, Adhyatmik Nagar, Ghaziabad-201015
(2022-23)

Vision and Mission of the Institute and Department

Vision of the Institute

"To make IMSEC an Institution of Excellence for empowering students through technical education coupled with incorporating values and developing engineering acumen for innovations and leadership skills for the betterment of society."

Mission of the Institute

- To promote academic excellence by continuous learning in core and emerging Engineering areas using innovative teaching and learning methodologies.
- To inculcate values and ethics among the learners.
- To promote industry interactions and produce young entrepreneurs.
- To create a conducive learning and research environment for life-long learning to develop the students as technology leaders and entrepreneurs for addressing societal needs.

Vision of the Department

To become a worldwide recognized center of excellence in the field of computer science for innovation, learning and entrepreneurship by developing professional leaders to serve society.

Mission of the Department

M1: To impart good quality experiential learning to get expertise in modern software tools and to cater the real time requirements of industry.

M2: To provide a conducive environment for faculty to engage and train students for progressive and convergent innovation.

M3: To provide students with a positive learning experience by reaching their goals through collaborative learning, professional grooming and a healthy environment based in co-curricular and extracurricular activities

Program Outcomes (POs)

S. No.	Program Outcomes / Program Specific Outcomes
PO1.	**Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2.	**Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3.	**Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4.	**Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5.	**Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
PO6.	**The engineer and society:** apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7.	**Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8.	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9.	**Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10.	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11.	**Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12.	**Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

PSO1: Empowering the students for continuous learning and develop efficient solutions for emerging challenges in the computation domain

PSO2: Preparing graduates who are able to apply standard software engineering practices in software development and management process using suitable programming languages and platforms

Program Educational Objectives (PEOs)

Graduate Will:

PEO1: To produce graduates who are employable in industries/public sector/research organizations or work as an entrepreneur

PEO2: To produce graduates who can provide solutions to challenging problems in their profession by applying computer engineering theory and practices

PEO3: To develop ability to demonstrate team work with the ability of leadership, analytical reasoning for solving time critical problems and strong human values for responsible professional.

Course Outcomes

CO. No.	DESCRIPTION	COGNITIVE LEVEL (BLOOMS TAXONOMY)
CO1(C406.1)	Developing a technical artifact requiring new technical skills and effectively utilizing a new software tool to complete a task	**K4,K5**
CO2(C406.2)	Writing requirements documentation, Selecting appropriate technologies, identifying and creating appropriate test cases for systems.	**K5,K6**
CO3(C406.3)	Demonstrating understanding of professional customs & practices and working with professional standards.	**K4,K5**
CO4(C406.4)	Improving problem-solving, critical thinking skills and report writing.	**K4,K5**
CO5(C406.5)	Learning professional skills like exercising leadership, behaving professionally, behaving ethically, listening effectively, participating as a member of a team, developing appropriate workplace attitudes	**K2,K4**

CO-PO-PSO Mapping

	PO 1	**PO2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**	**PSO1**	**PSO 2**
C406.1	3	3	3	3	3	2	1	2	2	2	2	3	3	3
C406.2	3	3	2	2	2	1	1	2	2	3	1	1	2	3
C406.3	1	1	1	1	1	3	2	3	2	2	2	2	2	1
C406.4	3	3	3	3	3	2	1	1	2	3	1	3	1	1
C406.5	1	1	1	1	1	2	2	3	3	3	3	1	1	1
C406	**2.2**	**2.2**	**2**	**2**	**2**	**2**	**1.4**	**2.2**	**2.2**	**2.6**	**1.8**	**2**	**1.8**	**1.8**

DECLARATION

We hereby declare that this submission are our own work and that, to the best of our knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgment has been made in the text.

Signature*:*
Name *: Aman Srivastava*
Roll No*: 2001430120014*
Date *:*

Signature*:*
Name *: Harsh Ruhela*
Roll No*: 2001430120040*
Date *:*

Signature*:*
Name *: Akash Singh*
Roll No*: 2001430120012*
Date *:*

CERTIFICATE

This is to certify that Mini Project entitled **"Online Voting System "** which is submitted by **Aman Srivastava, Harsh Ruhela** and **Akash Singh** in partial fulfillment of the requirement for the award of degree B. Tech. in Department of Computer Science of Dr. APJ Abdul Kalam Technical University, Uttar Pradesh, Lucknow is a record of the candidate's own work carried out by him/her under my supervision. The matter embodied in this report is original and has not been submitted for the award of any other degree.

Supervisor : Mr. R.K Singh
Date :

ACKNOWLEDGEMENT

We would like to express my gratitude to **Mr. R.K Singh** my supervisor for this mini-project. We would like to thank him for constant support, enthusiastic encouragement and useful critiques. We would like to thank our Director **Prof. (Dr.) Vikram Bali** and HOD of Computer Science **Dr. Sonia Juneja** for providing me this opportunity.

ABSTRACT

Our paper deals with online voting system that facilitates user(voter), candidate and administrator (who will be in charge and will verify all the user and information) to participate in online voting. our online voting system is highly secured, and it has a simple and interactive user interface.

The proposed online portal is secured and have unique security feature such as unique id generation that adds another layer of security (except login id and password) and gives admin the ability to verify the user information and to decide whether he is eligible to vote or not. It also creates and manages voting and an election detail as all the users must login by user name and password and click on candidates to register vote. Our system is also equipped with a chat bot that works as a support or guide to the voters, this helps the users in the voting process.

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INTRODUCTION

Candidate registration, document verification, and auto-generated User ID and pass for candidates and voters will all be part of the online election system. Candidate Login will be taken care of. Voters will be given a unique ID and password by each candidate, which they will use to vote for that candidate just once every election. The administrator may review each Candidate's information and papers; only after that, the Candidate's ID and Password will be produced, and incorrect accounts can be removed. Voters may access a list of Candidates in their region via the software system.

An online voting system is a software platform that allows groups to securely conduct votes and elections. High-quality online voting systems balance ballot security, accessibility, and the overall requirements of an organization's voting event.

At their core, online voting systems protect the integrity of your vote by preventing voters from being able to vote multiple times. As a digital platform, they eliminate the need to gather in-person, cast votes using paper, or by any other means (e.g. email, insecure survey software).

You may hear an online voting system being referred to as an online election system, an online e voting system, or electronic voting. These all make reference to the same thing: a secure voting tool that allows your group to collect input from your group and closely scrutinize the results in real time.

Keep reading for access to the most comprehensive online voting system introduction you will find.

TOOLS & TECHNOLOGY USED

TECHNOLOGICAL REQUIREMENTS

MICROSOFT .NET FRAMEWORK 2.0, 3.0, 3.5

LANGUAGES C#, ASP.NET, JAVA SCRIPT

WEB TECHNOLOGY ASP.NET 2.0,3.5

WEB TECHNOLOGY

AJAX TOOLKIT

DATABASE SQL SERVER 2021/2022

OPERATING SYSTEM WINDOW 10

TOOLS MICROSOFT VISUAL STUDIO 2020

OBJECTIVE

Traditional voting system

• Inefficient

• Takes time and human resources.

• Does not give an instant Poll result.

• Hard to track who voted and who don’t

Online Voting System

• Instant Poll result

• Easy to keep track of voters

• Use of Internet

FEATURES OF THE PROJECT

secured login procedure

 Knowing nominees of respective wards

 profiles can be modified

 Nominees can post their vision

 Casting vote is possible only with authentication of voter

 Inspection is performed on both voter and Nominees

 Suspected user can be reported against

 Abused user can be verified and blocked if necessary

HISTORY AND FEATURES OF THE TECHNOLOGY USED

INTRODUCTION:-

• ASP.NET is a part of the Microsoft .NET framework, developed by Microsoft, and is a powerful tool for creating dynamic and interactive web pages

• ASP.NET is a successor of Microsoft's ASP technology

• ASP.NET is built on the Common Language Runtime(CLR), allowing programmers to write ASP.NET code using any supported .NET language .

The .NET Framework 4.5 is a highly compatible, in-place update to the .NET Framework 4. By using the .NET Framework 4.5 together with the C#, Visual Basic, or F# programming language, you can write Windows apps. The .NET Framework 4.5 includes significant language and framework enhancements for C#, Visual Basic, and F# (so that you can more easily write asynchronous code), the blending of control flow in synchronous code, a responsive UI, and web app scalability . The .NET Framework 4.5 adds substantial improvements to other functional areas such as ASP.NET, Managed Extensibility Framework, Windows Communication Foundation, Windows Workflow Foundation, and Windows Identity Foundation. The .NET Framework 4.5 delivers better performance, reliability, and security.

INTRODUCTION TO JAVASCRIPT

- JavaScript is the world's most popular programming language.
- JavaScript is the programming language of the Web.
- JavaScript is easy to learn.
- This tutorial will teach you JavaScript from basic to advanced.

Why Study JavaScript?

JavaScript is one of the 3 languages all web developers must learn:

1. HTML to define the content of web pages
2. CSS to specify the layout of web pages
3. JavaScript to program the behavior of web pages

INTRODUCTION TO DATABASE SQL SERVER

Structured Query Language, abbreviated as SQL is a domain-specific language used in programming and designed for managing data held in a relational database management system (RDBMS), or for stream processing in a relational data stream management system (RDSMS). It is particularly useful in handling structured data, i.e. data incorporating relations among entities and variables

SQL offers two main advantages over older read–write APIs such as ISAM or VSAM. Firstly, it introduced the concept of accessing many records with one single command. Secondly, it eliminates the need to specify how to reach a record, e.g. with or without an index.

Originally based upon relational algebra and tuple relational calculus, SQL consists of many types of statements, which may be informally classed as sublanguages, commonly: a data query language (DQL),[a] a data definition language (DDL),[b] a data control language (DCL), and a data manipulation language (DML).[c] The scope of SQL includes data query, data manipulation (insert, update, and delete), data definition (schema creation and modification), and data access control. Although SQL is essentially a declarative language (4GL), it also includes procedural elements.

INTRODUCTION TO WEB TECHNOLOGY

 Web technologies refers to the way computers/devices communicate with each other using mark up languages. It invo It is communication across the web, and create, deliver or manage web content using hypertext markup language (HTML).

 A web page is a web document which is written in in HTML (hypertext markup language)

 It is said to have brought the world into a small village where people and devices can communicate to each other seamlessly.

 WWW has allowed for the access of information that would have been impossible to find or may have been difficult to find without the www.

APPROACHES

• Vote for your favorite Candidate.

• Check the number of votes of each Candidate.

• Check the candidate who is leading and then Exit.

• The user chooses one of the options.

• If the user chooses 1, then the list of candidates is displayed and the user can now choose from this list of candidates.

• If the user chooses 2, then the list of candidates along with their current number of votes is displayed.

• If the user chooses 3, the name of the candidate with the maximum number of votes is displayed. If there is more than one candidate with maximum votes, display an error message stating “No winner”.

• This program continues until the user chooses 0 to exit().

FUTURE SCOPE

• Increasing number of voters as individuals will find it easier and more convenient to vote.

• Less effort and less labor intensive, as the primary cost and focus primary on creating, managing, and running a secure web voting portal.

• The system can be used anytime and from anywhere by the Voters.

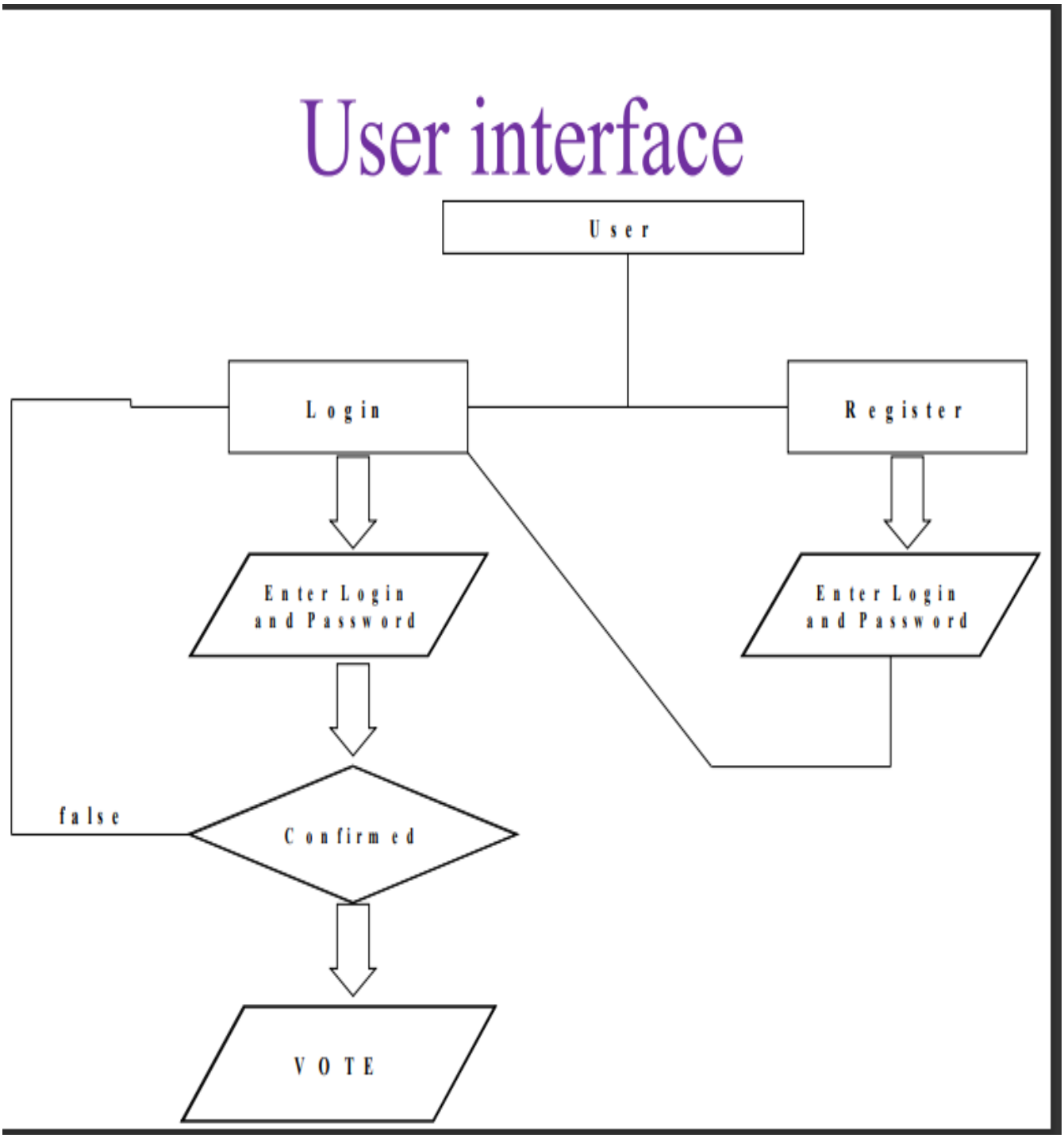
• Saves time and reduces human intervention.

• The system is flexible and secured to be used.

• Unique Identification of voter through Aadhar number.

• No fraud vote can be submitted

FLOW CHART


User interface
User
Login
Register
Enter Login and Password
Enter Login and Password
false
Confirmed
VOTE

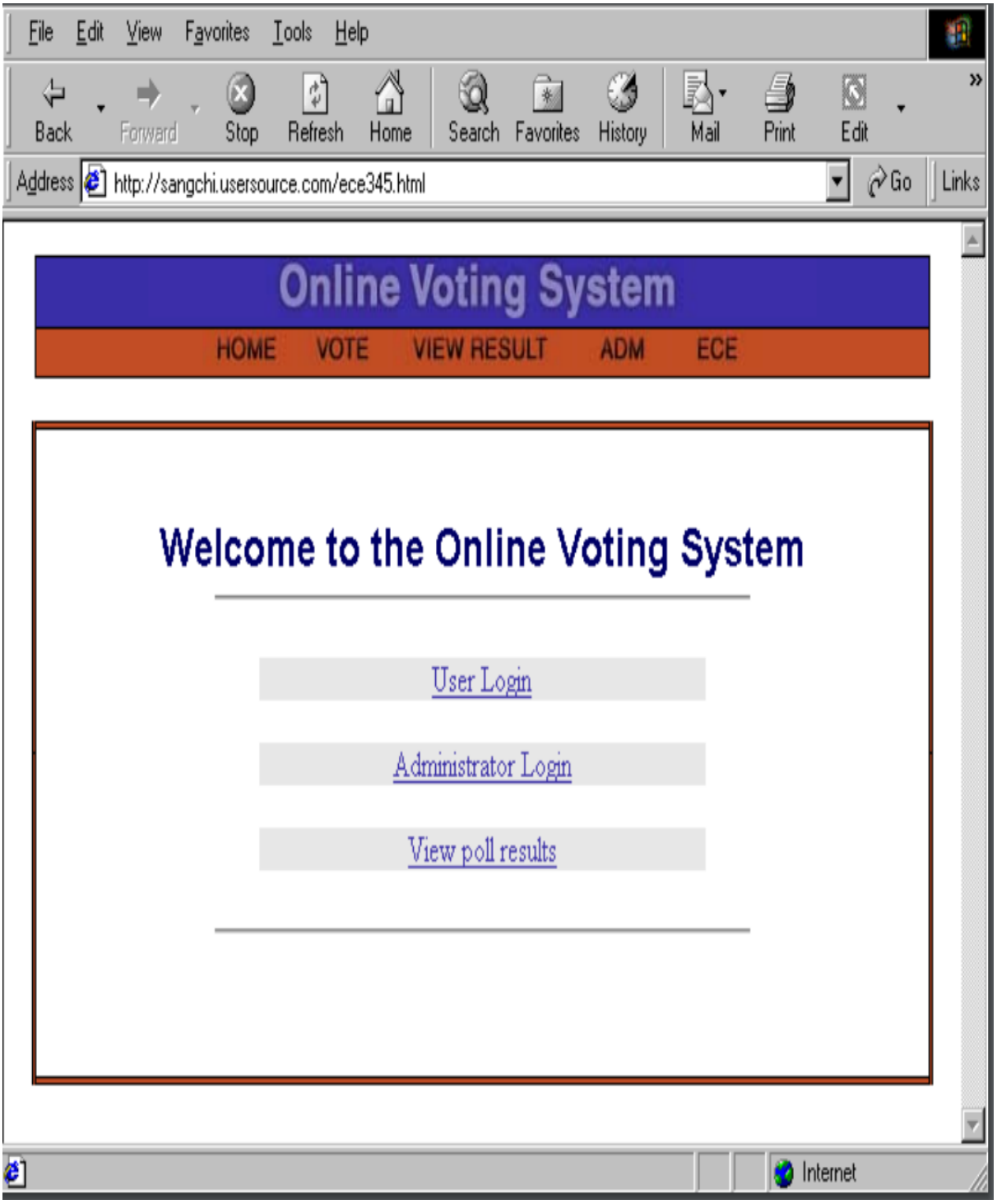
WORK DONE

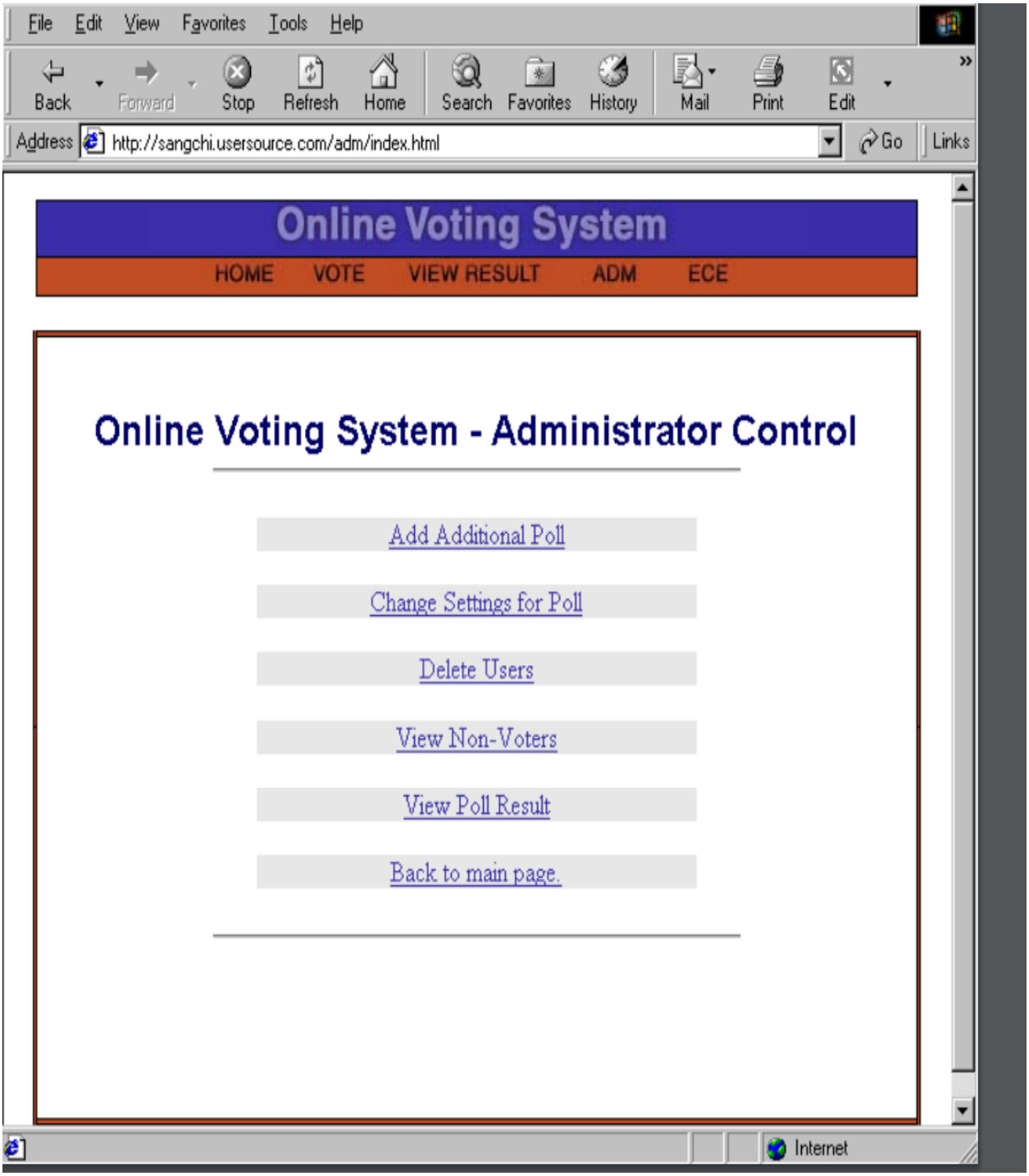
IMPLEMENTATION

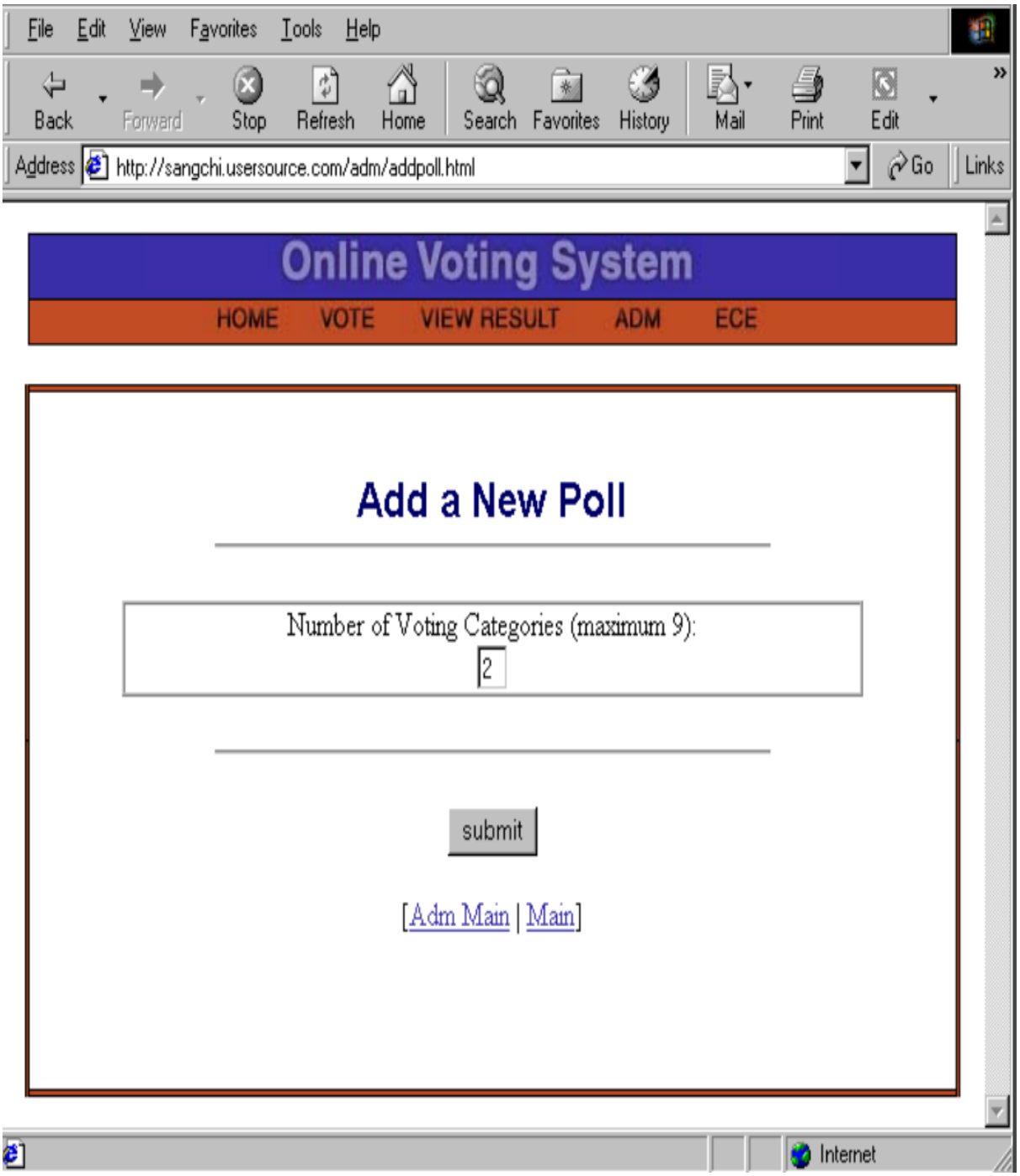
```
import tkinter as tk
import socket
from tkinter import *
from PIL import ImageTk,Image

def voteCast(root,frame1,vote,client_socket):

    for widget in frame1.winfo_children():
        widget.destroy()

    client_socket.send(vote.encode()) #4

    message = client_socket.recv(1024) #Success message
    print(message.decode()) #5
    message = message.decode()
    if(message=="Successful"):
        Label(frame1, text="Vote Casted Successfully", font=('Helvetica', 18, 'bold')).grid(row = 1,
            column = 1)
    else:
        Label(frame1, text="Vote Cast Failed... \nTry again", font=('Helvetica', 18, 'bold')).grid
            (row = 1, column = 1)

    client_socket.close()



def votingPg(root,frame1,client_socket):

    root.title("Cast Vote")
    for widget in frame1.winfo_children():
        widget.destroy()

    Label(frame1, text="Cast Vote", font=('Helvetica', 18, 'bold')).grid(row = 0, column = 1, rowspan
        =1)
    Label(frame1, text="").grid(row = 1,column = 0)
```

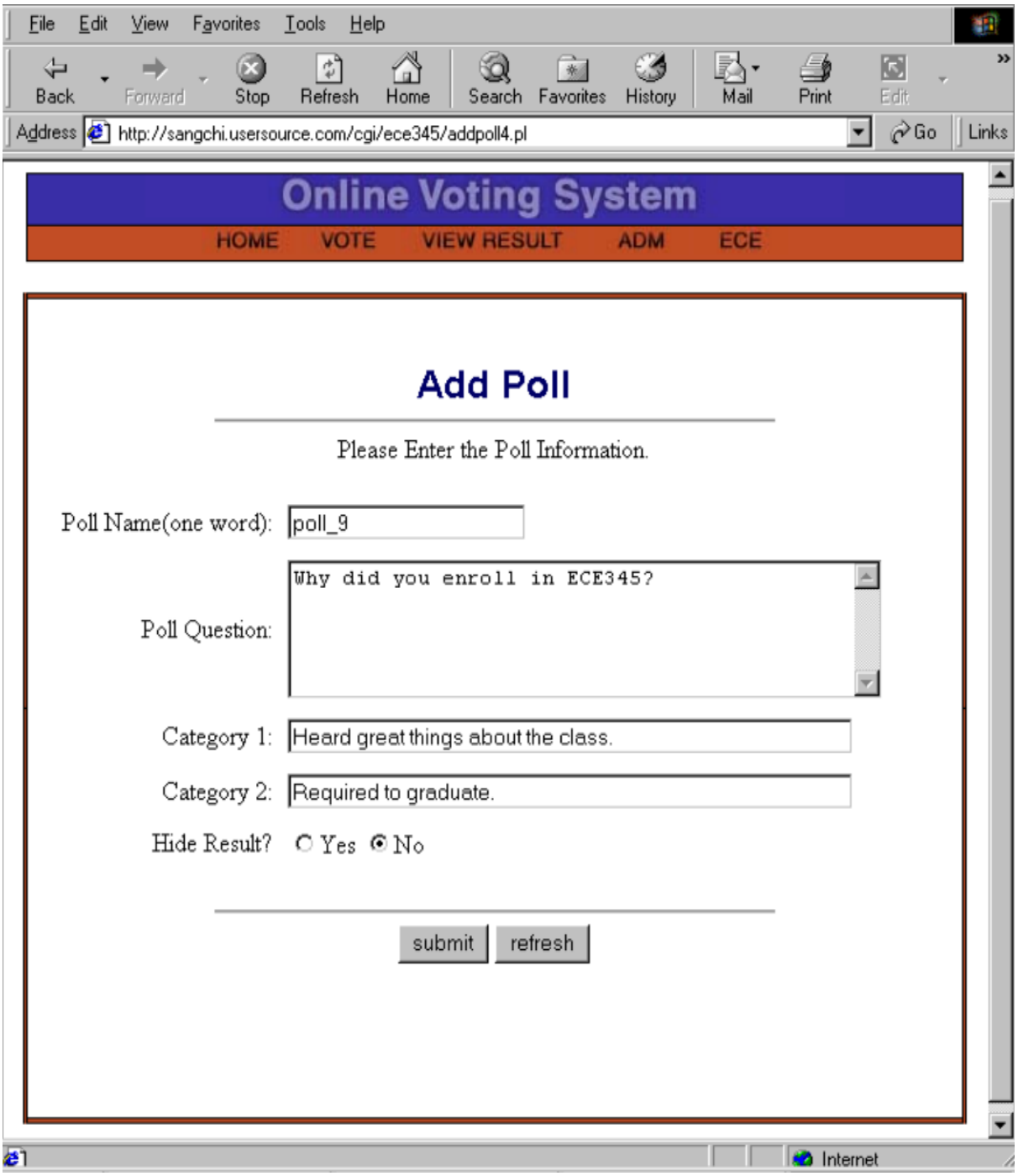
```
33
34      vote = StringVar(frame1,"-1")
35
36      Radiobutton(frame1, text = "BJP\n\nNarendra Modi", variable = vote, value = "bjp", indicator = 0,
            height = 4, width=15, command = lambda: voteCast(root,frame1,"bjp",client_socket)).grid(row =
            2,column = 1)
37      bjpLogo = ImageTk.PhotoImage((Image.open("img/bjp.png")).resize((45,45),Image.ANTIALIAS))
38      bjpImg = Label(frame1, image=bjpLogo).grid(row = 2,column = 0)
39
40      Radiobutton(frame1, text = "Congress\n\nRahul Gandhi", variable = vote, value = "cong", indicator
            = 0, height = 4, width=15, command = lambda: voteCast(root,frame1,"cong",client_socket)).grid
            (row = 3,column = 1)
41      congLogo = ImageTk.PhotoImage((Image.open("img/cong.jpg")).resize((35,48),Image.ANTIALIAS))
42      congImg = Label(frame1, image=congLogo).grid(row = 3,column = 0)
43
44      Radiobutton(frame1, text = "Aam Aadmi Party\n\nArvind Kejriwal", variable = vote, value = "aap",
            indicator = 0, height = 4, width=15, command = lambda: voteCast(root,frame1,"aap"
            ,client_socket) ).grid(row = 4,column = 1)
45      aapLogo = ImageTk.PhotoImage((Image.open("img/aap.png")).resize((55,40),Image.ANTIALIAS))
46      aapImg = Label(frame1, image=aapLogo).grid(row = 4,column = 0)
47
48      Radiobutton(frame1, text = "Shiv Sena\n\nUdhav Thakrey", variable = vote, value = "ss", indicator
            = 0, height = 4, width=15, command = lambda: voteCast(root,frame1,"ss",client_socket)).grid
            (row = 5,column = 1)
49      ssLogo = ImageTk.PhotoImage((Image.open("img/ss.png")).resize((50,45),Image.ANTIALIAS))
50      ssImg = Label(frame1, image=ssLogo).grid(row = 5,column = 0)
51
52      Radiobutton(frame1, text = "\nNOTA    \n  ", variable = vote, value = "nota", indicator = 0,
            height = 4, width=15, command = lambda: voteCast(root,frame1,"nota",client_socket)).grid(row
            = 6,column = 1)
53      notaLogo = ImageTk.PhotoImage((Image.open("img/nota.jpg")).resize((45,35),Image.ANTIALIAS))
54      notaImg = Label(frame1, image=notaLogo).grid(row = 6,column = 0)
55
56      frame1.pack()
57      root.mainloop()
58
```

```
if _name_ == "_main_":
        root = Tk()
        root.geometry('500x500')
        frame1 = Frame(root)
        client_socket='Fail'#        votingPg(root,frame1,client_socket)
```


File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit
Address http://sangchi.usersource.com/ece345.html
Go Links
Online Voting System
HOME VOTE VIEW RESULT ADM ECE
Welcome to the Online Voting System
User Login
Administrator Login
View poll results
Internet


File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit
Address http://sangchi.usersource.com/adm/index.html
Go Links
Online Voting System
HOME VOTE VIEW RESULT ADM ECE
Online Voting System - Administrator Control
Add Additional Poll
Change Settings for Poll
Delete Users
View Non-Voters
View Poll Result
Back to main page.
Internet


File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit
Address http://sangchi.usersource.com/adm/addpoll.html
Go Links
Online Voting System
HOME VOTE VIEW RESULT ADM ECE
Add a New Poll
Number of Voting Categories (maximum 9):
2
submit
[Adm Main | Main]
Internet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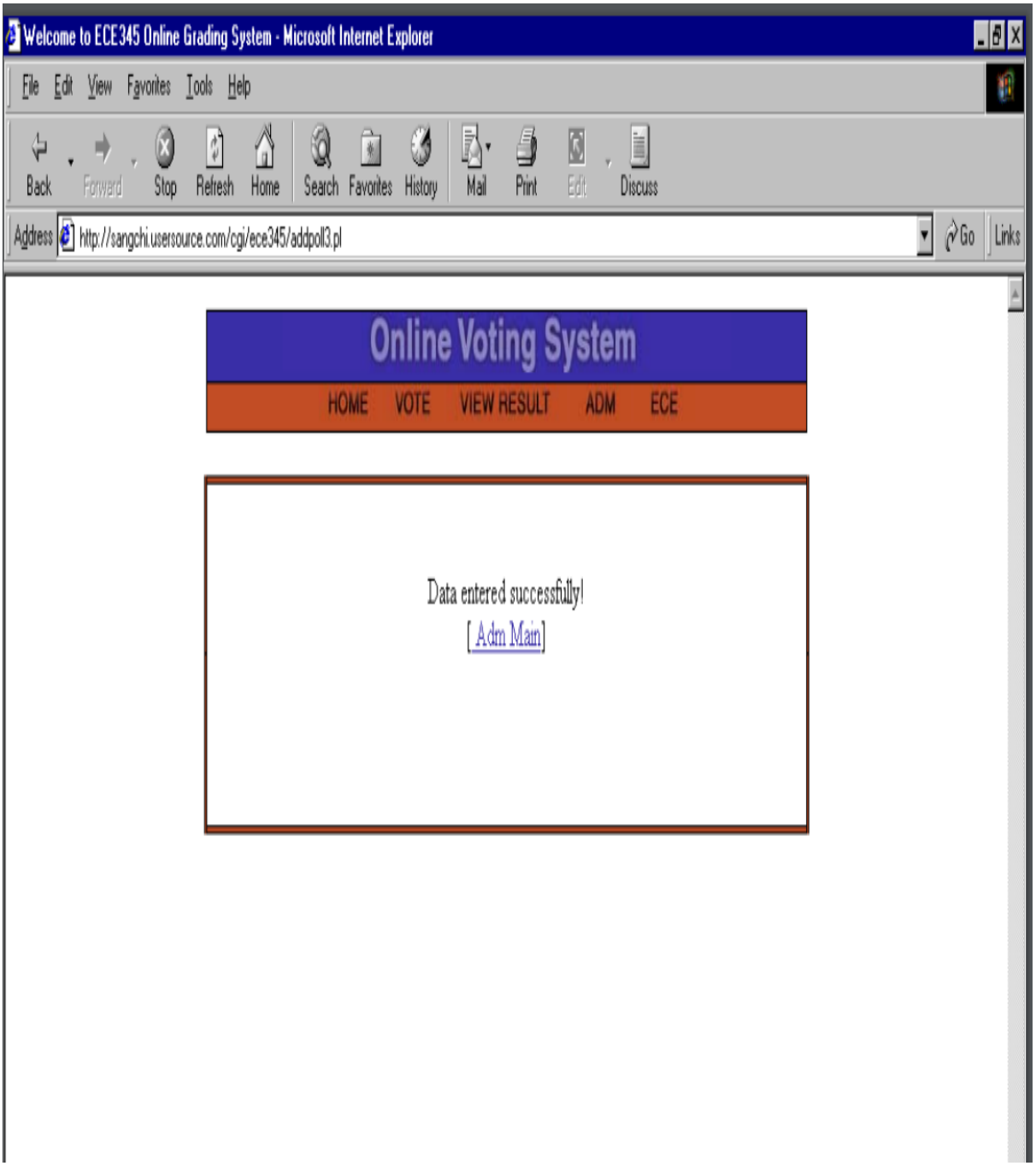
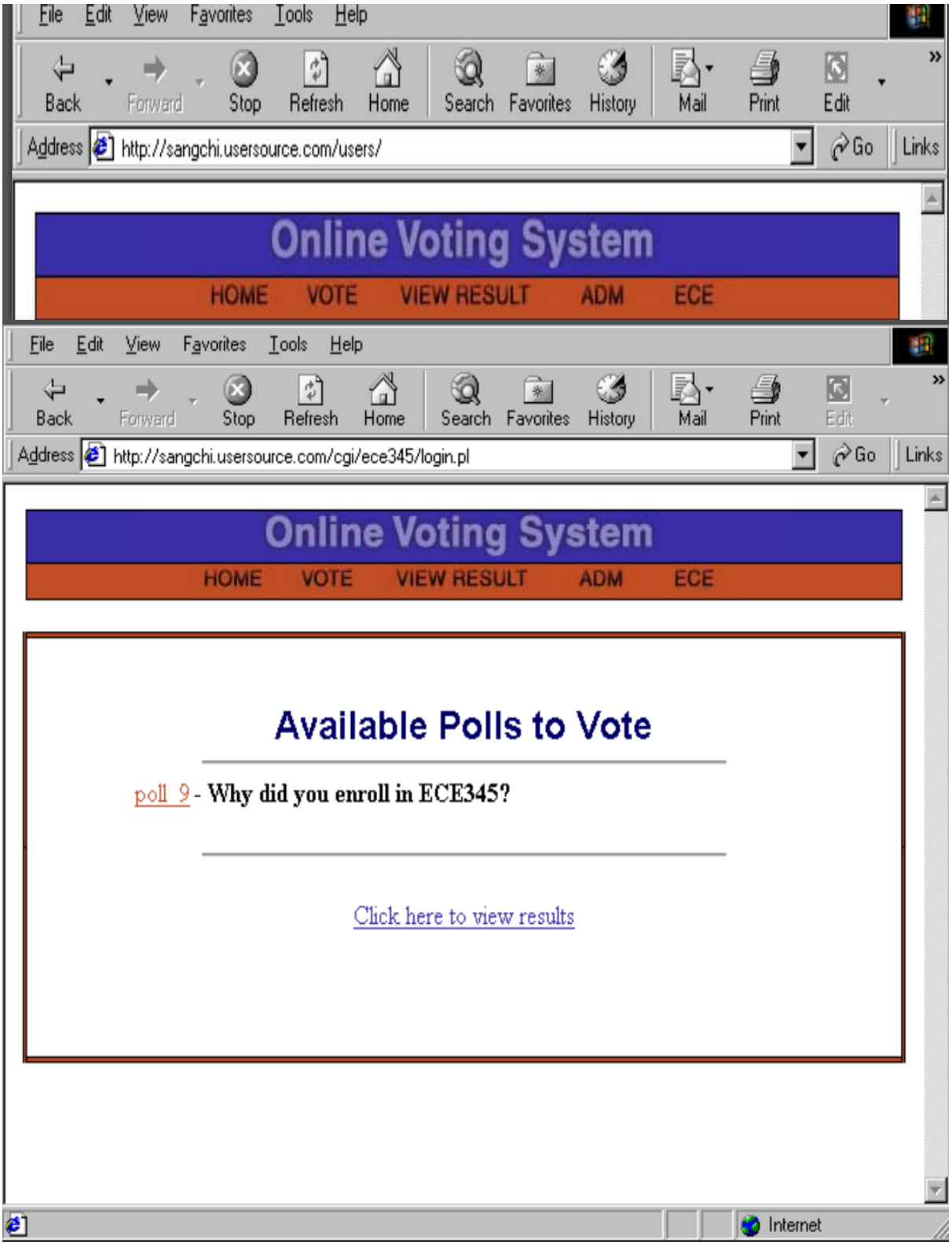
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit
Address http://sangchi.usersource.com/cgi/ece345/addpoll4.pl
Go Links
Online Voting System
HOME VOTE VIEW RESULT ADM ECE
Add Poll
Please Enter the Poll Information.
Poll Name(one word): poll_9
Poll Question: Why did you enroll in ECE345?
Category 1: Heard great things about the class.
Category 2: Required to graduate.
Hide Result? Yes No
submit refresh
Internet


Welcome to ECE345 Online Grading System - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss
Address http://sangchi.usersource.com/cgi/ece345/addpoll3.pl
Go Links
Online Voting System
HOME VOTE VIEW RESULT ADM ECE
Data entered successfully!
[Adm Main]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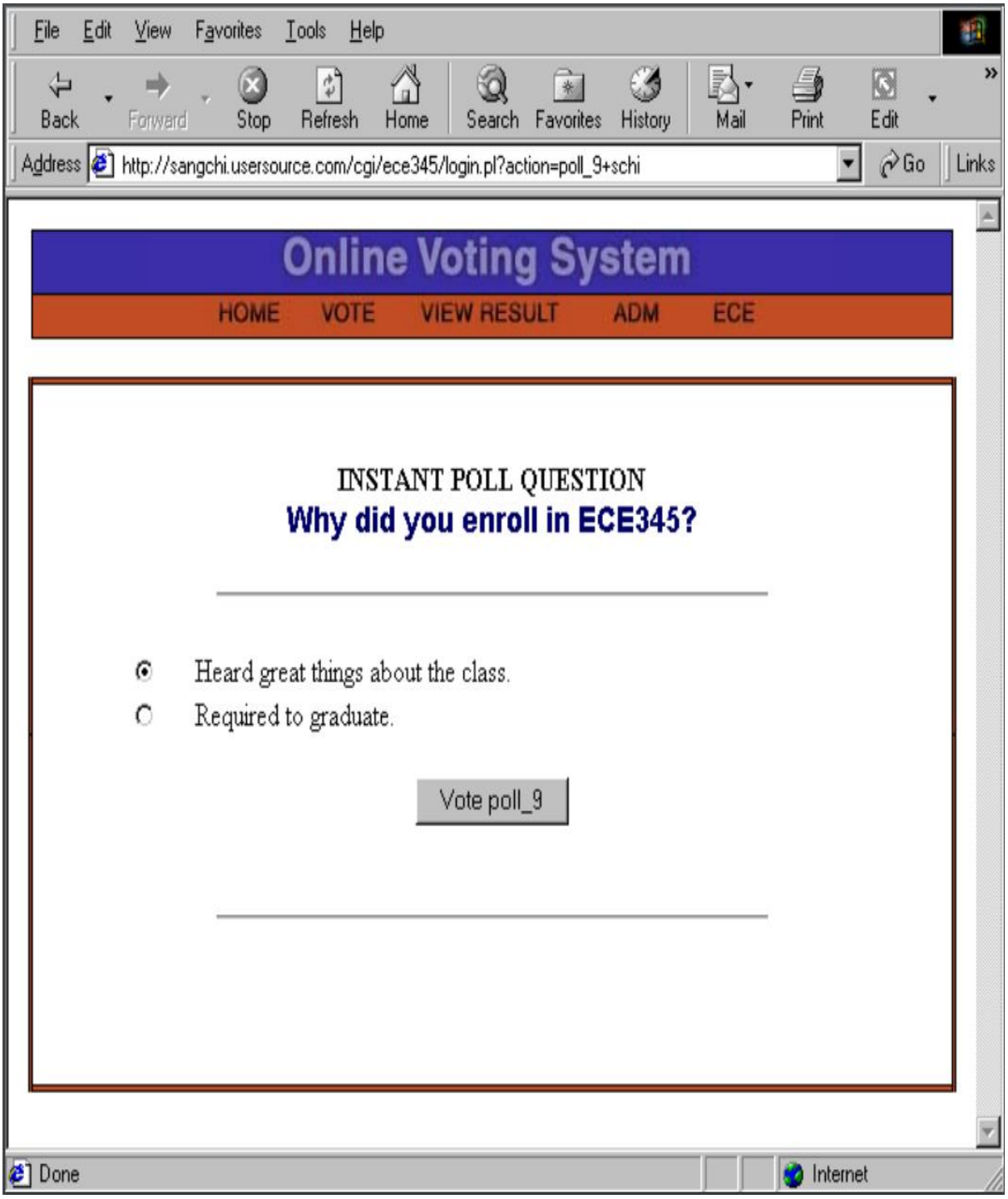
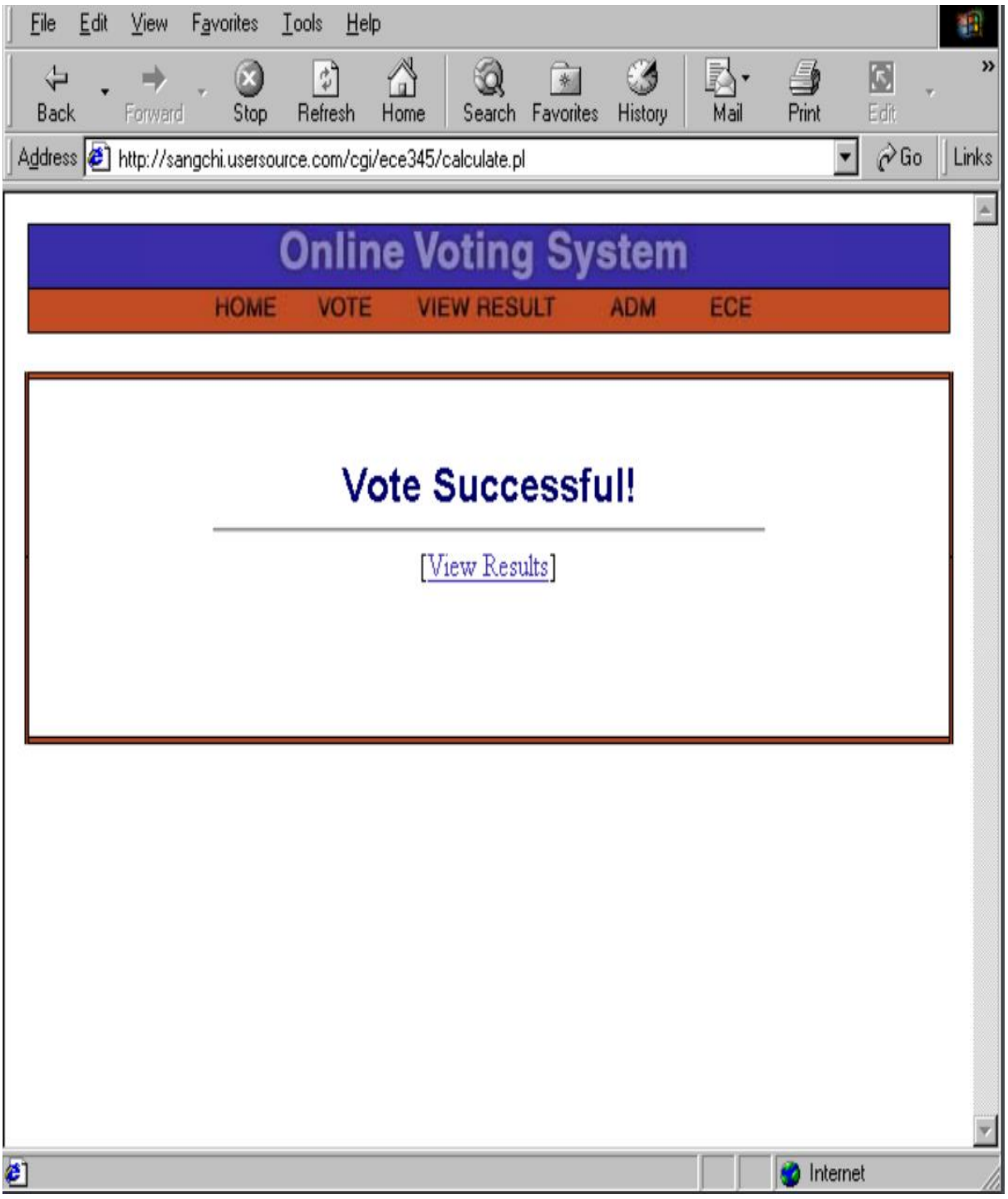
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit
Address http://sangchi.usersource.com/cgi/ece345/login.pl
Go Links
Online Voting System
HOME VOTE VIEW RESULT ADM ECE
Available Polls to Vote
poll 9 - Why did you enroll in ECE345?
Click here to view results
Internet


File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit
Address http://sangchi.usersource.com/cgi/ece345/login.pl?action=poll_9+schi
Go Links
Online Voting System
HOME VOTE VIEW RESULT ADM ECE
INSTANT POLL QUESTION
Why did you enroll in ECE345?
Heard great things about the class.
Required to graduate.
Vote poll_9
Done
Internet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Address http://sangchi.usersource.com/cgi/ece345/calculate.pl
Go Links
Online Voting System
HOME VOTE VIEW RESULT ADM ECE
Vote Successful!
[View Results]
Internet

CONCLUSION

Online Voting Systems have many advantages over the traditional voting system. Some of these advantages are less cost, faster generation results, easy accessibility, accuracy, and low risk of human and mechanical errors. It is very difficult to develop online voting system which can allow security and privacy on the high level. Future development focused to design a system which can be easy to use and will provide security and privacy of votes on acceptable level by proper authentication and processing section. It is easy to use and it is less time consuming. It is very easy to debug.

This online Voting system will manage the Voter's information by which voter can login and use his voting rights. The system will incorporate all features of voting system. It provides the tools for maintaining voter's vote to every party and it count total no. of every party. There is a DATABASE which is maintained by the ELECTION COMMISION OF INDIA in which all the names of voter with complete information is stored. In this user who is above 18years's register his/her information on the database and when he/she want to vote he/she has to login by his id and password and can vote to any party only single time. Voting detail store in database and the result is displayed by calculation. By online voting system percentage of voting is increases. It decreases the cost and time of voting process. It is very easy to use and it is very less time consuming. It is very easy to debug. The traditional method of manual voting system has few drawbacks. This method is obviously not efficient as it wastes the voter's energy and quite slow in term of completion. This smart system involves the voter's can cast their vote easily, and can be implemented to the entire India.

REFERENCES

[1]Himanshu Agarwal and G.N. Pandey "Online Voting System for India Based on AADHAAR ID" 2013 Eleventh

[2] Smita B. Khaimar, P. Sanyasi Naidu, Reena Kharat "Secure Authentication for Online Voting System"

[3]Shivendra Katiyar, Kullai Reddy Meka, Ferdous A. Barbhuiya, Sukumar Nandi "Online Voting System Powered

Sites Used: https://www.geeksforgeeks.org/

https:// stackoverflow.com/

https://www.w3schools.com

https://www.electionsonline.com/online-voting-system/

https://en.wikipedia.org/wiki/Electronic_voting

IMS Engineering College, Ghaziabad
PROFORMA OF MINI-PROJECT PROPOSAL

Name of the Mini Project: ONLINE VOITING SYSTEM **Date:** ……

S. No	Roll number	Student Name	Signature
01	2001430120014	AMAN SRIVASTAVA	
02	2001430120040	HARSH RUHELA	
03	2001430120012	AKASH SINGH	

AIM of Mini Project:

The proposed online portal is secured and have unique security feature such as unique id generation that adds another layer of security.

Methodology Used:

LANGUAGES C#, ASP.NET,JAVA
SCRIPT
WEB TECHNOLOGY ASP.NET 2.0,3.5
WEB TECHNOLOGY

Technology Used:

MICROSOFT .NET
FRAMEWORK
2.0,3.0,3.5
WEB TECHNOLOGY
AJAX TOOLKIT
DATABASE SQL SERVER 2021/2022
OPERATING SYSTEM WINDOW 10

Supervisor Name: MR. R.K. SINGH

Signature of the Supervisor

Date: ……