**CIS 634-OBJECT ORIENTED SOFTWARE ENGINEERING**

**Software Design Specification (SDS) Document**

**“UNI VOTE” - a college voting system**

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**1.1 Goals and objectives**

Overall goals and software objectives are described.

**1.2 Statement of scope**

This Online Voting web application can work as automated voting system for small scale to large scale areas like organizations (team leads, manager), institutions/colleges/universities (President, Vice President) or public use (to elect public representatives).

**1.3 Software context**

“Online Voting System” is web application. In this application voters in an organization/institution/region can cast their vote online without going to any physical polling station with easily access. In this voter’s have to be registered first and get approval from admin. Where as election contestants or candidate has to register which later on get approval from admin. While registration voter will assigned with voter id through which he/she log-in to the system and cast their vote to the candidate they choose.

**1.4** **Hardware and Software Resource Requirements**

Operating System Windows/Mac or Linux

Processor x86 or x64

RAM 512 MB (minimum), 1 GB (recommended)

Hard Disk up to 200 MB

PHP 5.3.3

Server Apache Tomcat

Database MySQL

1. **Data design**

A description of all data structures and databases

Graphical user interface, application

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**2.1 Lifecycle Model Used**

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**2.1 Data structures**

Data structured that are available to major portions of the architecture are described.

**2.2 Database description**

Database created as part of the application are described here

**ADMIN**

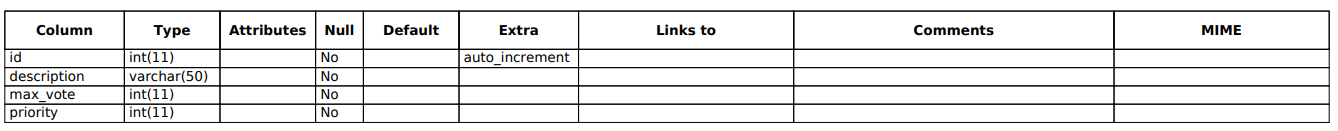
Table

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**CANDIDATES**Table

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**POSITIONS**



**TEAM**

Table

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**VOTERS**

Table

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**VOTES**

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**3.0 Architectural and component-level design**

A description of the software architecture is presented.

**3.1 Architecture diagrams**

Architectural styles used are described. The online voting will have a client-server architectural style as it is the most adaptable for our system. This is because server will be accessed by a user through a client. The client can send a request to the server. This request could be made for achieving goals such as browsing the website, login, register, voting, adding/managing system etc. The server will receive this request and would go through the database to retrieve the corresponding data that is requested to complete certain task. In this way server client interaction goes so this will allow multiple users to access the website and the server will consider each client instances to server accordingly to requests made by users.

Architectural model (includes components and their interactions)

|  |  |  |
| --- | --- | --- |
| Front-End | Database | Backend |
| Register  VerifyRegInfo  Login  VerifyLogInfo  Vote  Database  Emailer  Positions | admin  candidate  positions  voters  votes | database  voted  emailer  print  add  remove |

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**3.2 Description for Components**

**3.2.1 Static models**

Class diagram:

Chart, line chart

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**3.2.2 Dynamic models**

Sequence diagram:

Diagram

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**VOTER LOGIN**

**Diagram

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**CANDIDATE REGISTER**

**Diagram

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**VOTE VOTE**

**Diagram

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**VOTE REGISTER**

**4.0 User interface design**

A description of the user interface design of the software is presented.

* 1. User Interface Design

Use Case UC-1: Register

If the user does not have an account a link “Register” is provided in UC-1 Login. This link takes the user to the register page. This register page allows new users to create their own account.

Another one is for candidate register.

Graphical user interface, application

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Use Case UC-2: Login

This page allows a user/admin to log into the system by entering their username and password.

Graphical user interface, text, application

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Use Case UC-3 Vote: - this page allows end user to vote

Graphical user interface, application

Description automatically generated

Use Case UC-4 Admin: - admin dashboard here admin can manage the site, voters, positions, candidates, votes etc.

Graphical user interface, website

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**5.0 Appendices**

Presents information that supplements the design specification.

**5.1 Requirements traceability matrix**

This matrix traces states components and data structures to software requirements.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Project Concepts |  |  |  |  |
| Constraints | Register | Login | Vote | Positions |
| End Users | x | X | x |  |
| Admin | x | x | x | x |
| Candidate | x |  | x | x |
| Database Helper | x | x | x | x |