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**Capstone Project Proposal Report**

**(Individual Report)**

**Instructions:**

This form is to be completed by each student doing Project registration to fulfill their senior design or capstone requirement. It must be completed and submitted to your Guide. Each student must complete this form individually.

This report is to be completed during the starting of the semester, while the project description report will be completed during end of the semester.

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| Guide Approval (initials/date): |  |  |

**CAP4001– Capstone Project Proposal Report**

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| **Student Name** | | Dirisala Rohith Reddy | | |
| **Student Register Number** | | 19BCE7303 | | |
| **Programme** | | B,Tech ,Computer Science and Engineering | | |
| **Semester/Year** | | Fast-track Fall Semester 2022-23 | | |
| **Guide(s)** | | Prof. Ajay Kumar Mallick | | |
| **Project Title** | | Online Auction System | | |
| **Team Composition:** Provide the information below for each member of the **project team**. Include **all** project team members, not just those in your discipline or those enrolled for Capstone project. Please also include yourself! | | | | |
| **Reg. No** | **Name** | | **Major** | **Specialization** |
| 19BCE7303 | Dirisala Rohith Reddy | | CSE | Core |
| 19BCN7092 | Madati Hruthik Yadav | | CSE | Network Security |

**Project and Task Description**: Provide a brief (one or two page) technical description of the design project and your specific tasks, as outlined below: (use a separate sheet)

1. **Provide a summary of the project, including a description of the project and its requirements, the purpose, specifications, and a summary of the approach. If this is a continuing project, you may use and/or edit the same project description.**

Traditional Auction houses have been around for a very long time . But there are certain shortcomings of them . So we are building an Website for the auctions to be completed effectively. The system is designed to allow users to set up their products for auctions and bidders to register and bid for various products available for bidding.

Since it is a Time critical application the testing of the designed web application should be done on a larger base to avoid malfunctions during deployment. For deployment of the website , we are using AWS(Amazon Web Services) instances so that there would be least chances of failures.

1. Describe the specific role and tasks that **you individually** will be completing as part of the design of the project. What **specific deliverables** will you produce?

We are considering the classic case of a typical website, So we are mentioning the roles and tasks for it:

* Information gathering
* Planning
* Web Design(Front end)
* Development (Back end)
* Content creation
* Testing
* Deployment

Among this I would be completing the tasks:

* Information gathering
* Development
* Content creation

However Deployment phase is to be completed collectively by the team members.

1. Discuss in detail the specific approach that will be used to complete **your** portion of the design.

Since it is a development Project , the most viable software development model is “Waterfall model” as it is a sequentially driven project where all steps of development process are planned in advance and there would be nearly zero changes during design and development process.

But since there are some processes which could run concurrently like (Information gathering and Planning ), (Web design and Development ) I could work with my teammate in parallel to save time and resources.

1. Describe the phases of the design process that will be incorporated and what work will be accomplished during those phases.

* Initial stage is information gathering where we collect all the relevant information regarding the project.
* The second stage is Planning. In this stage we understand the constraints involved in project development and plan the rest of the stages accordingly with time constraints .
* The third stage is Web design where we design the front end of the website using various tools and layouts as required .
* The fourth stage is Development which is also referred as Backend of the site. It is developed one of the programming language that is deemed to fit the requirements of the application .
* The fifth stage is Content creation . This stage requires creating all the content in the website which would be used and interacted by the end-user.
* The sixth stage is Testing . In this stage we separate the application into various modules and test each module separately and finally perform Integration testing on the whole application.
* The final stage is Deployment where we the website will be made available to all the users .We make sure the load is handled properly on the web server and put some backup servers in case of failure .

**Outcome Matrix:** Describe your plan to demonstrate each of the outcomes below.

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| **Outcomes:** | **Plan for demonstrating outcome:** |
| a) an ability to apply knowledge of mathematics, science, and engineering | Concepts of Data Structures and Algorithm , Database Management Systems , Web Application Development are used |
| c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability | * By using various softwares like IDE, AWS console, Word press , We could gain a lot of insight about what goes into Web development. * By finishing the project in 2 months , we could better understand how much time actually goes into each step of development process |
| d) an ability to function on multidisciplinary teams | Since building a website includes working on different disciplines like Software development , Network Security , Web design |
| e) an ability to identify, formulate, and solve engineering problems | Team members could gain insight into solving the problem in sequential manner and developing solutions to the real world problems |
| g) an ability to communicate effectively | Platforms like Ms Teams, Github could be used for team collaboration during development stage of the website |
| k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice | After completing the project ,Team members could develop any Web Application using the software tools they have learnt during the development of this project. |

**Realistic Constraints:**

**1.Reliability**: Our Website is designed by following the high engineering standards possible to make sure that is very much reliable to the regular userbase.

**2.Availability:** The website requires optimal internet connection for usage. Apart from that there would be no hinderance in usage for a normal user.

**3.Usability:** We are using the simplest User Interface possible so that any new user could navigate the website with ease.

**4.Economic:** Since there are only software tools involved in the development of the website , there would be no major cost intensive processes involved.

**Engineering Standards:**

**1.Security:** As the website is being deployed on AWS, which has many tools for securing the web server there would very less chance of the site being hacked by malicious users. In addition to that SSL technology is used to enhance the existing security.

**2.Performance:** Website will be hosted on ec2 instances having 16GiB of memory which is very much required when handling time sensitive applications.

**3.Maintainability:** Since the project is being developed on waterfall model there would be high chances of restoring any failed component and maintaining the pre- existing components is very easy.

**4.Portability:** The website will not running on any user’s machine instead it will be running on the host machine. So it will run any machine if it has an active internet connection. It will be highly portable.