**ABES Engineering College, Ghaziabad**

**Department of Electrical & Electronics Engineering**

**Project Title Proposal**

1. **Project Title (**in CAPITAL letters**):**

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| --- |
| **WEB TOOL FOR ATTAINMENT CALCULATION OF COURSE OUTCOMES AND PROGRAM OUTCOMES.** |

**2. Particulars of Proposed Guide(s) [**Maximum. 2 Guides per Project**]:**

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Field of Specialization** |
| **GUIDE** | Mr. Gurpreet Singh | Power Quality and Accreditation |
| **CO-GUIDE (Optional)** | Mrs. Pragati Srivastava Deb | Model Reduction and Accreditation |

**3. Particular of Student(s) [**Maximum 4 students per Project**]:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S. No.** | **Name** | **University Roll No.** | **Percentage up to**  **Previous Semester** | **Technical Skill Sets** |
| **1** | Aryan Shukla | 1900320210016 | 79.6% | C++, HTML, CSS, Bootstrap, Django, JS |
| **2** | Ishika Bansal | 1900320210030 | 82.3% | C++, HTML, CSS |
| **3** | Prashant Kumar Sharma | 1900320210039 | 73% | C++, Python, HTML, CSS |
| **4** | Priyam Utkarsh Yadav | 1900320210040 | 64% | Python, HTML, CSS |

**4. Objectives of the proposed Project:**

**(Maximum 2000 characters)**

* + - 1. To design a website for attainment calculation of course outcomes and Program outcomes.
      2. To design the clone of the application used by the department for attainment calculation and thus reducing cost.

**5. Motivation/ Literature Survey for the Project:**

**(Maximum 1000 characters)**

Multilevel inverters (MLI) with reduced components are becoming popular to achieve higher voltage levels with lower cost and complexities of the circuit. Most of the reduced switch MLIs use a large number of isolated voltage sources that have a large total standing voltage (TSV) and higher losses. Moreover, many reduced component MLIs have been developed to reduce the number of switches only and have not utilized the dc-link voltages properly. Thus, an inverter needs to be designed in which the number of dc sources is also small and utilized fully. In this paper, a novel single-phase, multicell MLI configuration is presented that can generate a maximum number of output voltage levels using a minimum number of switches and dc sources. Two optimal configurations of the proposed MLI are proposed based on the minimum requirements of components with the optimum voltage stress of the highest rated switches. Moreover, the TSV of the proposed optimal MLI also becomes low. A generalized multicell optimum MLI is presented and the number of components, voltage stress of all the switches, and the TSV of the proposed as well as the other inverters also determined by the generalized expressions for comparison purpose. Few links regarding the literature survey are given below.

1. <https://www.researchgate.net/publication/306034699_Measuring_Attainment_of_Course_Outcomes_and_Program_Outcomes_-_A_Simplified_Approach_as_per_Self-Assessment_Report_-June_2015>
2. https://www.researchgate.net/publication/286791109\_Method\_for\_estimation\_of\_attainment\_of\_program\_outcome\_through\_course\_outcome\_for\_outcome\_based\_education

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**6. Project Duration (in months):**

**7. Work plan *(including detailed methodology and time schedule in form of Gantt Chart)***

**(Max 5000 characters for methodology)**

Step-1: Literature Survey & Motivation behind work

Step-2: Learning Hyper Text Markup Language [HTML].

Step-3: Grasping the concepts of Cascading Style Sheet [CSS].

Step-4: Acquiring knowledge of Bootstrap and Django.

Step-5: Implementing the above concepts to design the website.

Step-6: Building up the home page.

Step-7: Creating the Login /Logout interface.

Step-8: Working on the backend formulas.

Step-9: Creating rest modules for backend server.

Step-10: Hosting of website.

**8. Technical Skills involved in the Project:**

|  |  |
| --- | --- |
| **S. No.** | **Skill required** |
| 1 | In depth knowledge of HTML, CSS. |
| 2 | Basic understanding of Bootstrap. |
| 3 | Advanced knowledge of Django. |
| 4 | Rudimentary knowledge of Heroku. |

**9. Relevance to the POs & PSOs:** *[To be filled by Guide Only]*

|  |  |
| --- | --- |
| **S. No.** | **PO/ PSO** |
| 1 | An ability to use the techniques, skills and modern engineering tools necessary for engineering practice. |
| 2 | An ability to apply reasoning to assess societal, health, safety, legal and cultural issues and  Consequent responsibilities relevant to professional engineering practice. |
| 3 | An ability to understand the impact of engineering solutions in a global, economic, environmental and societal context. |
| 4 | An understanding of professional and ethical responsibility. |
| 5 | An ability to function on multi-disciplinary teams. |
| 6 | An ability to communicate effectively. |
| 7 | An ability to demonstrate and apply knowledge and understanding of engineering and management principles to manage projects and in multidisciplinary environments. |
| 8 | Recognition of the need for and an ability to engage in life-long learning. |

**10. Expected Outcomes of the Project:**

|  |  |
| --- | --- |
| **S. No.** | **Outcome of the Project** |
| 1 | Website for the department |
| 2 | Uploading the data through backend server. |
| 3 | Analysis of the data based on the attainment calculations. |

**Signature of Project Supervisors**

**Name:** Mr. Gurpreet Singh & Mrs. Pragati Shrivastava Deb

**Date:** 28-09-2022