



Proceedings of
**INTERNATIONAL CONFERENCE ON ADVANCES IN
MECHANICAL & CIVIL ENGINEERING - 2023**



Organized by: Department of Mechanical & Civil Engineering



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MULTICON-W 2023

IC-AMCE 2023

14th International & National Conferences and Workshops

Certificate

APPRECIATION

This is to certify that Dr./Mr./Ms. **Viren Chandanshive** has presented / participated / contributed for a FLP length paper with the title Planning , Scheduling and Resource Allocation of Residential Building Using Microsoft Project- A Review in the International Conference on Advances in Mechanical & Civil Engineering (IC-AMCE 2023) organized during February, 24th & 25th, 2023 at Thakur College of Engineering and Technology, Kandivali (E), Mumbai.

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Planning , Scheduling and Resource Allocation Of G+14

Residential Building Using Microsoft Project

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Abstract— Project duration and budgets are two highly important factors in the construction industry that affect any project's success. It is crucial to plan as well as arrange various activities of every project since, in this construction sector, each one has certain features. Expenditure rises significantly as a consequence of the postponement, resulting in an impact on the cost that was anticipated. To ensure the project's smooth operations and successful completion, planning and scheduling must be done and followed. The application of Primavera and Microsoft Project (MSP) for project planning and scheduling for residential construction projects is discussed in this review. There is a brief description of the research done in the areas of resource allocation, scheduling, and project planning is carried out. The papers that have been published in reputable journals are taken into consideration while creating a thorough evaluation. It was observed that Microsoft Project software is frequently utilized in the Indian construction sector because of its user-friendly interface and adaptable nature. Primavera, however, allows for multiple user access, making it useful for managing several projects using a single software interface. Additionally, the division of the major activity into smaller tasks with their own start and end dates can be helpful for the proper scheduling procedure. For the efficient administration of construction projects, a project management software strategy would be beneficial for the Indian construction industry. This review helps to understand the project planning, scheduling, and resource allocation and contributes to the construction management.

Keywords: Planning, Scheduling, MSP, Primavera, Construction Management, etc.

I. INTRODUCTION

The economy of the nation is greatly influenced by the construction industry, which gives the populace

numerous jobs. The project's aims must be met in order for it to succeed. [1] The economy and building sector in our country have grown incredibly rapidly in the decades after independence. The construction process is a series of several tasks that must be completed in order for the project to be completed successfully. [2] A result of the expanding population and the lack of available land. The construction of multi-story structures allows for the housing of several people in a small space. Rapid population expansion that has reduced the amount of land available is one of India's biggest problems. Additionally, the houses that are currently available are rented out at standard rates and include 52 homes on 13 storeys with all the essential conveniences. [3] The difficulty of projects is rising. The demand for teams and organizations to perform effectively is increasing as a result of the current economic situation. Businesses are having difficulty responding rapidly to shifting market conditions and customer demands. [4] The project schedule presents required task, milestone dependencies, resource needs, task durations, and deadlines graphically. [5]

Microsoft Project is made to help project managers create plans, allocate resources to tasks, and monitor progress, control costs, and review workloads. Budgets are created for projects based on resource costs and assignment work. When resources are assigned to a task, the software calculates the cost as work multiplied by a rate, rolling it up to the task level, any summary task level, and eventually the organizational levels. [6] Project managers can use the software to create schedules, assign resources to tasks, track progress, manage budgets, and measure workloads. [7] Additionally, to third-party plug-ins for the critical chain and event chain methodologies,