

## Comparative Study on Design Results of a Multi-storied Building using SAP2000 and ETABS

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### Extended Abstract

Structural Analysis and design are predominant in finding out significant threats to integrity and stability of a structure. Multi storied structures, when designed, are made to fulfill basic aspects and serviceability. Since Robustness of structure depends on loads imposed, it requires attention. To model and analyze a structure in both software to obtain the reactions and forces obtained. To compare the results of both the software's' obtain results from manual calculation at base of each column due to dead load and live load are compared with the results of both software's. All the challenges faced by structural engineers were taken as opportunities to develop software's such as STAAD PRO, ETABS & SAFE, SAP etc., with ease of use. Software's such as ETABS and SAP2000 are leading commercial software's worldwide for structural analysis. It was used for the first time in Pakistan according to our knowledge. The design results using SAP2000 and ETABS of a rectangular RCC building, for regular plan configuration, are obtained and compared. ETABS gives the storey drift & joint displacement due to earthquake load but SAP2000 gives none of the above option. The data output option of ETABS are much more useful for lateral design but SAP2000 is primarily used for gravity analysis & design.