Design and Visualization of a 3BHK Villa using Revit Architecture in a BIM Environment

Faiyas

B.Tech , CIVIL Engineering Student

Arya College of Engineering and Research Center, Kookas, Jaipur, Rajasthan

Abstract: *Building Information Modeling (BIM) has revolutionized the architecture, engineering, and construction (AEC) industry by integrating multi-disciplinary data into intelligent 3D models. This paper explores the application of Autodesk Revit Architecture, a leading BIM software, in designing a two-story 3BHK villa at Arya College of Engineering and Research Centre, Jaipur, Rajasthan. The study details the workflow, tools, and outcomes of creating a comprehensive 3D model, emphasizing Revit's role in enhancing design accuracy, visualization, and professional skill development. Ten diagrams illustrate critical stages, including the user interface, modeling tools, floor plans, 3D model, site components, rendering, camera views, and walk-through.*

Keywords: Building Information Modeling