Designing a 240-unit residential complex in Lahijan city with a climatic architecture approach (based on building bio-climate index)

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Abstract Creating comfortable and desirable living conditions and ensuring the safety of the inhabitants is due to the unfavorable environmental and atmospheric conditions of the integral principles of architecture and building. Most of the forms used today for buildings do not have the capacity to create indoor conditions. Over time and population growth, the need for housing has increased among people. This time-consuming need has created apartments, so that the most important change in the process of human settlement has been apartment ownership in recent decades. Hence, the need for residential complexes has increased. Creating comfortable conditions for humans is one of the principles of architectural design and building. Considering the various factors affecting the design of housing construction, such as economic, social, cultural, environmental, climate, technology, and the quality of physical space and human interactions of the housing needs. If the design is based on the climate, it will be much easier for the users to feel comfortable and save energy. Therefore, after the introduction of the city of Lahijan and its climate, using the meteorological data and preparing the Mahani table, it has been designed and studied by studying climate parameters including temperature, humidity, wind, precipitation and building orientation. Which can provide the users with the physiological comfort and welfare conditions and ultimately utilize these findings in the design of other complexes with similar conditions.

Keywords: Keywords: climate, climate friendly design, residential complex, climate friendly design, Gilan climate, Mahani index, mahani table

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