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## EARLY ARCHITECTURE DESIGN QUALITY OPTIMIZATION USING BIM

By

## Reem Mustafa AbdelAziz Mustafa

A Thesis Submitted to the Faculty of Engineering at Cairo University in Partial Fulfillment of the Requirements for the Degree of MASTER OF SCIENCE in Architectural Engineering

FACULTY OF ENGINEERING, CAIRO UNIVERSITY GIZA, EGYPT 2021

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Under the Supervision of

### Prof. Dr. Sherine Mohy Eldin Wahba

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#### **Title of Thesis:**

## EARLY ARCHITECTURE DESIGN QUALITY OPTIMIZATION USING BIM

#### Key Words: (must be 5 words only)

Early architecture design, BIM, design quality optimization, design quality guidelines, design assessment

#### Summary: (not more than 150 word and the summary must be in the same page)

Architecture design quality is highly dependent on optimizing the early phases of the design process. For this purpose, it's important to identify the quality guidelines that could optimize architecture quality while being attainable at such early phases. Building information modeling (BIM) can easily contribute to optimizing early architecture design while providing a solution to the design challenges faced at the early design phases. Therefore, this thesis aims at maximizing the role of BIM in optimizing the architecture design process in the early phases; by providing a framework that clarifies the possible BIM contributions and potentials.

## Disclaimer

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute.

I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

Name: Reem Mustafa AbdelAziz Mustafa Date: / /2021

Signature:

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