

# ANALYSIS AND DESIGN SIMPLY SUPPORTED BEAM USING FORTRAN PROGRAMME

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## ABSTRACT

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As civil engineers, once we are assigned in designing or analyzing beams, columns, footings, slabs or foundations, many paper works have to be done. In order to reduce the worked and increase the efficiency in the production of most economical design, a programmed that could be used to assist the production of design is needed.

In this project, only simply supported concrete beam is being considered. Therefore all the steps that been used is aim for designing or analyzing an economical simply supported reinforced concrete beam. Furthermore, all the steps are referred to the BS Code 8110 that is a must or a guideline in designing or analyzing a simply supported reinforced concrete beam.

This programmed has three alternative ways for the designing and analyzing of simply supported reinforced concrete beam. The ways are all decided based on the information that a designer has. For example, dead load, live load, length of beam, concrete strength, width of beam, height of beam and so on.

For the first case, it is chosen when the width, the height and the total area of tensile reinforcement are known. For the second case, it is chosen when only the width and the height of the beam are known. And the last alternative is chosen when none of the width, the height, and the total area of the tensile reinforcement is known.