# DESIGN AND ANALYSIS OF CONTINUOUS REINFORCED CONCRETE BEAMS USING VISUAL BASIC

by

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Project Report
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Thank you all

## SUMMARY

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Project:Analysis and design of R.C. beams using visual basic.

The purpose of the project is to produce a computer programe using the Visual Basic computer language, facilitate the analysis and design of a continous beam.

It is very well known in civil engineering that this particular method is quite complicated ,and time consuming, and the possibility of errors and accurancy is an unavoitable.

That is why computer technology is required in this specific project.

The method of moment distribution is used, for the analysis of the beam, since our project is considered as a continuation of an existing one which uses this approach. The design is done in accordance with the British standards (BS8110).

Our main consideration was not only to improve the existing computer program by eliminating bugs and upgrading it to a friendly user software, but also to go further and offer the alternative of additional features. Taking advantage of the latest computing technology.

The list below contains the main additions incorporated in this program:

- Bending moment and shear force envelope are presented graphically.
- All the forms have been created for the input and the output results.
- The theory of the cantilever has been written for a further addition in the program.

It is hoped that this study has given enough additional information to fulfill its purpose which is the upgrating of an existing program to such an extend that can be used even by the professional engineer who is not very proficient in the use of computers.

# C O N T E N T S

Section 4 (ANALYSIS OF A CONTINUOUS BEAMS MANUALY)

Section 5 (CODING)

4.1. Intro Form
4.2. Input
4.2.1. Geometry Form
4.2.2. Properties
4.2.3. Loading Form
4.2.4. Safety factors
4.3. Analysis
4.3.1. Solve
4.4. Results
4.4.1. B.M. Envelope
4.4.2. S.F. Envelope
4.5. Resign
4.5.1. Properties
4.5.2. Member Design