

# **TWO-DIMENSIONAL FRAME ANALYSIS USING FORTRAM LANGUAGE**

**by**

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## SUMMARY

All the structures can be considered to be frames with horizontal, vertical and inclined members. The loads applied on them can be along the members or on the joints. The loads applied along the members can be uniformly distributed ("dead load" - self weight of the member, "imposed load" - load expected to be carried by the member, "wind") or point load ("partitions" - walls). The loads applied on the joints can be horizontal-vertical forces or moments.

This loads have as a result to produce displacements at the joint which must be calculated in order for the frame to be correctly design and the needed reinforcement to be provided.

Many ways have been used to calculate these displacements but as the frame equilibrium provides as with a system of equations with many unknowns and it is difficult and it takes time to solve it manually nowadays computer programs are used for the calculations.

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