Working on OpenSTAAD and Modelling of indurating hood and Duct

In contrast to STAAD.Pro, which is widely used in the analysis and design of structures and structural elements owing to its highly interactive and user friendly GUI environment, OpenSTAAD is a much more powerful tool though far less experimented with by users since it requires a good knowledge of object oriented programming skills.

The OpenSTAAD library of functions is classified under the following general categories:

i)STAAD File Input and Output (I/O)

ii)Structure Geometry

iii)Member Specifications

iv)Properties

v)Loads

vi)Output Results:-

a)Nodes

b)Beams

c)Plates

d)Solids

vii)STAAD Pre-Processor

viii)STAAD Post-Processor

ix)Creating Dialog Boxes and Menu Items

1.Instantiating the OpenSTAAD Library for Use

The first thing necessary to access STAAD project data from within another application is to instantiate, or create an instance of OpenSTAAD within the other application. In Visual Basic for Applications (VBA), this may be done by creating an object variable and then assigning to it the OpenSTAAD object. The VBA *GetObject* function may be used for this.

The object which controls the STAAD.Pro environment is referred to as *StaadPro.OpenSTAAD*. This object must be created in order to get access to any of the internal graphical functions within STAAD.Pro (including the creating of menu items and dialog boxes) as well as access to STAAD's viewing, geometry modeling, results grid, and post-processing functions. The following VBA function can be used to instantiate or create this object: