CHAPTER 3

METHODOLOGY

3.1 GENERAL

In this study, ANSYS 12.0 is used to simulate the shear wall model. They can be divided into 3 steps which is preprocessor, solution and post processor. Under preprocessor, there are several steps needed to be determined in modeling which are element of the model, material properties of the model, cross-section and real constant of the model. After modeling, the boundaries condition of the model need to be added and the load is applied for the analysis. In this case, pressure is used for both the uniformly distributed axial and lateral loads. After that, non-linear analysis is started after the settings are determined. Under post-processor, the results is listed and plotted for each respectively nodes and elements.

3.2 FLOW CHART OF METHODOLOGY

The Figure 3.1 shows the flow chart of the methodology. It consists of 3 different steps which is Preprocessor, solution and post-processor.

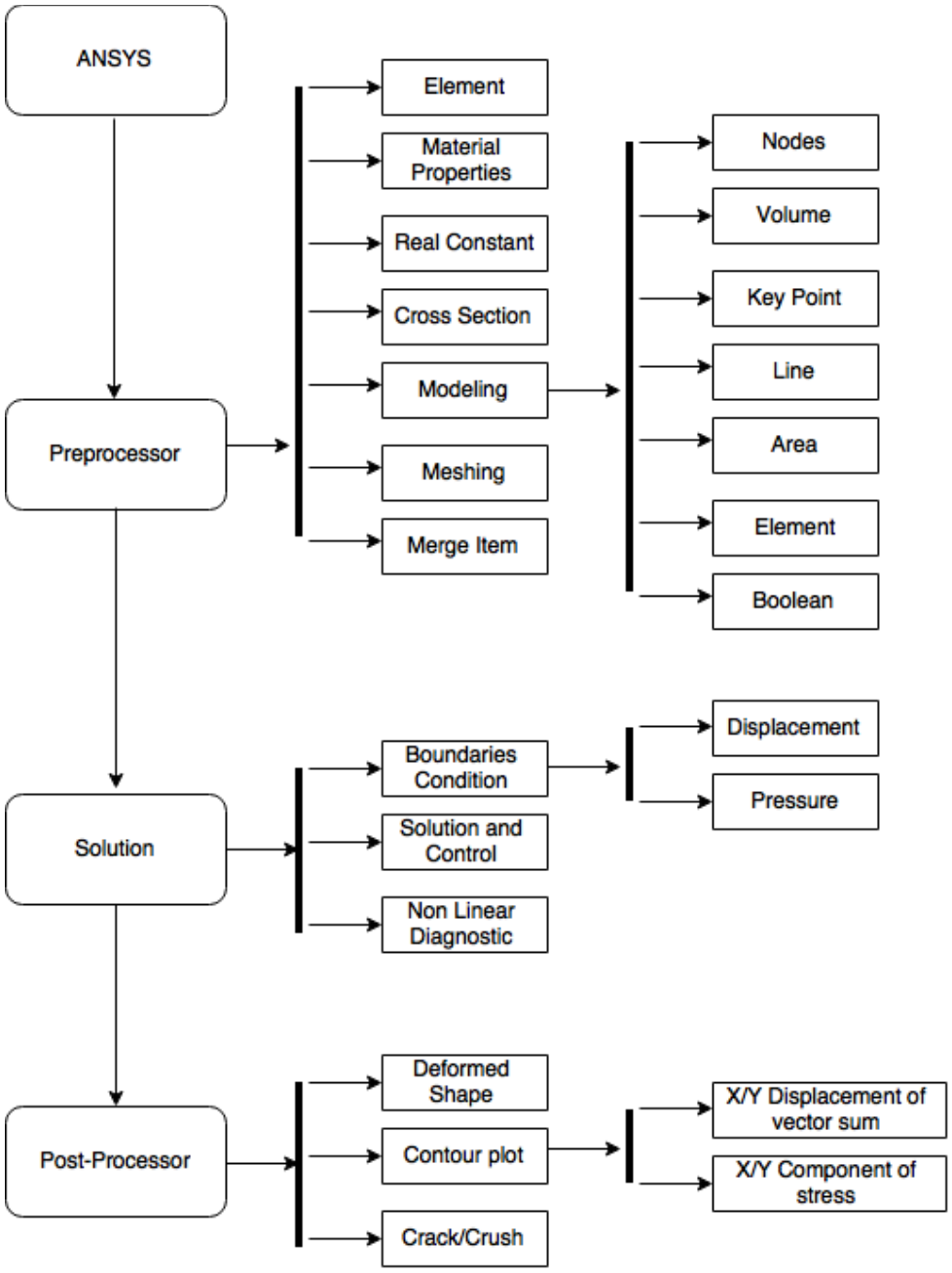

Figure 3.1: Flow chart of Methodology

3.3 PREPROCESSOR

The preprocessor is the preparation before modeling and modeling. It consists of steps to simulate the concrete shear wall by entering the properties, elements and cross section of the shear wall.

3.3.1 Element

The element used in this study was SOLID65 and LINK8 only. The SOLID65 is representing the concrete while the LINK8 is representing the steel reinforcement. Both of the elements is chosen under Preprocessor > Element Type > Add/Edit/Delete. The element types are listed as Figure 3.2 after chosen.

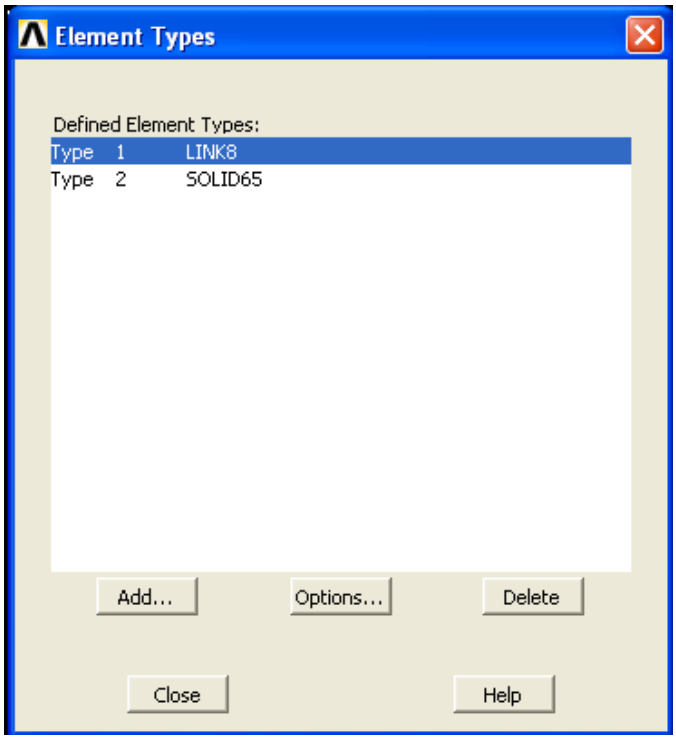

Figure 3.2: Element