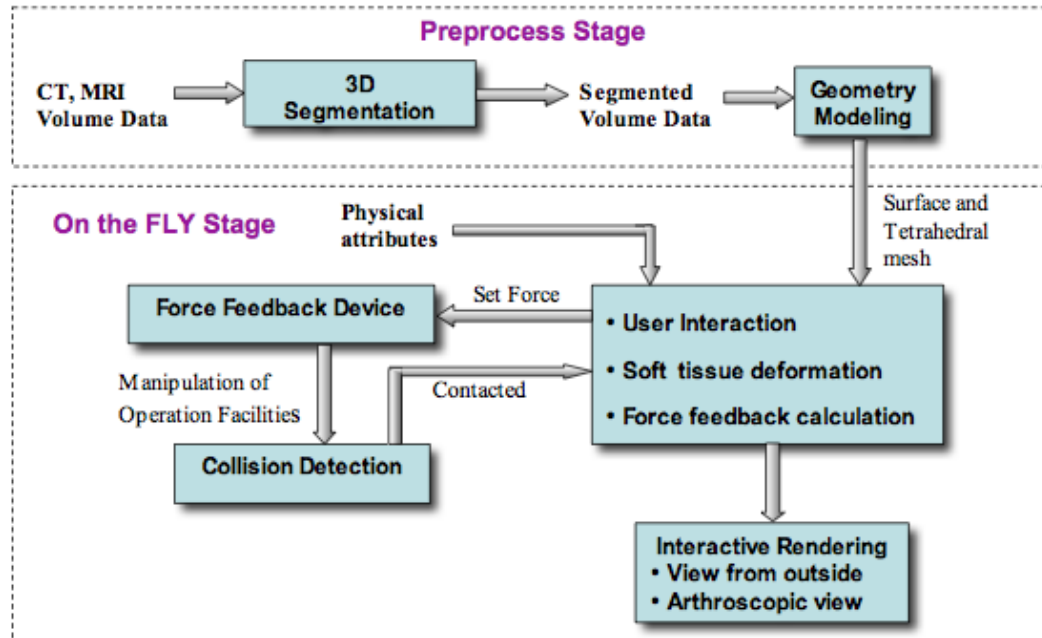


Assignment on Virtual Medicine seminar –

The following diagram shows the software system architecture of a virtual arthroscopy project --



- (1) What are the main reasons for performing each of the following operations? (50%)
 - a. 3D Segmentation
 - b. Assigning physical attributes
 - c. Surface and tetrahedral meshing
 - d. Collision detection
 - e. Soft tissue deformation
- (2) List (i.e. just give the name and without providing detailed description) two common algorithms for medical segmentation. (10%)
- (3) List two common algorithms for soft tissue deformation. (10%)
- (4) List two common algorithms for collision detection. (10%)
- (5) List two common algorithms for interactive rendering of volume data. (10%)

