**Pseudocode of the DLL structure:**

* Main:
  + **Constants.cpp/Constants.h**
    - Purpose: *Include constant variables*
    - ***Status: DONE (Carlos)***
  + **Polar2RectangularLibrary.cpp/Polar2RectangularLibrary.h**
    - Purpose: *This library changes GEO polar coordinates into E-C rectangular coordinates on unit earth*
    - ***Status: DONE (Carlos)***
  + **TransformationMatrixLibrary.cpp/TransformationMatrixLibrary.h**
    - Purpose: *This library determines the transformation matrix*
    - ***Status: DONE (Carlos)***
  + **Earth2SatLibrary.cpp/Earth2SatLibrary.h**
    - Purpose: *This library transforms earth centered coordinates to satellite centered coordinates*
    - ***Status: DONE (Carlos)***
  + **Sat2EarthLibrary.cpp/Sat2EarthLibrary.h**
    - Purpose: *This library transforms satellite centered coordinates to earth centered coordinates*
    - ***Status: DONE (Carlos)***
  + **NormVectorLibrary.cpp/NormVectorLibrary.h**
    - Purpose: *This library normalizes vectors in satellite system to have a unit z-component*
    - ***Status: DONE (Carlos)***
  + **EliminateLibrary.cpp/EliminateLibrary.h**
    - Purpose: *This library eliminates points which are automatically within the ellipse if other points are within or on the ellipse*
    - ***Status: DONE (Carlos)***
  + **PointsCheckEllipseLibrary.cpp/PointsCheckEllipseLibrary.h**
    - Purpose: *This library determines whether all points are contained in the minimum ellipse having the smallest axes*
    - ***Status: DONE (Carlos)***
  + **MinimumSemiMinorAxisLibrary.cpp/MinimumSemiMinorAxisLibrary.h**
    - Purpose: *This library determines an ellipse with a given minimum semi-major axis, having the smallest area*
    - ***Status: DONE (Carlos)***
  + **MinimumSemiMinorAxis2Library.cpp/MinimumSemiMinorAxis2Library.h**
    - Purpose: *This library determines an ellipse with a given minimum semi-major axis*
    - ***Status: DONE (Carlos)***
  + **TrigonometricEqSolveLibrary.cpp/ TrigonometricEqSolveLibrary.h**
    - Purpose: *This library solves trigonometric equations approximately using double precision*
    - ***Status: DONE (Carlos)***
  + **3PointsEllipseLibrary.cpp/3PointsEllipseLibrary.h**
    - Purpose: *This library determines an ellipse containing 3 points of psout and encompassing the rest m-3*
    - ***Status: DONE (Carlos)***
  + **Solution3LinearEqLibrary.cpp/Solution3LinearEqLibrary.h**
    - Purpose: *This library computes the 3 unknowns from linear equations*
    - ***Status: DONE (Carlos)***
  + **2PointsPSOUTLibrary.cpp/2PointsPSOUTLibrary.h**
    - Purpose: *This library determines an ellipse having the smallest area, containing two points of psout, and encompassing the rest (m-2)*
    - ***Status: DONE (Carlos)***
  + **DeterminantLibrary.cpp/DeterminantLibrary.h**
    - Purpose: *This library evaluates a determinant*
    - ***Status: DONE (Carlos)***
  + **OrientationLibrary.cpp/OrientationLibrary.h**
    - Purpose: *This library determines the ellipse orientation*
    - ***Status: DONE (Carlos)***
  + **AddPointingRotationalErrorsLibrary.cpp/AddPointingRotationalErrorsLibrary.h**
    - Purpose: *This library extends the points to be considered so that the various pointing and rotational errors can be taken into account*
    - ***Status: DONE (Abhi) - Carlos***
  + **AddStationKeepingErrorLibrary.cpp/AddStationKeepingErrorLibrary.h**
    - Purpose: *This library takes point ptin and transforms it with respect to the station keeping error*
    - ***Status: DONE (Abhi) - Carlos***
  + **AddPointingErrorLibrary.cpp/AddPointingErrorLibrary.h**
    - Purpose: *This library takes point ptin and transforms it with respect to the pointing error*
    - ***Status: DONE (Abhi) - Carlos***
  + **AddRotationalErrorLibrary.cpp/AddRotationalErrorLibrary.h**
    - Purpose: *This library takes point ptin and transforms it with respect to the rotation error*
    - ***Status: DONE (Abhi) - Carlos***
  + **DisplacementEquatPlaneLibrary.cpp/DisplacementEquatPlaneLibrary.h**
    - Purpose: *This library calculates the components of a 0.1 deg displacement in the Equatorial plane in the S-C coordinate system*
    - ***Status: DONE - Carlos***
  + **ProjectionSatEllipseLibrary.cpp/ProjectionSatEllipseLibrary.h**
    - Purpose: *This library projects satellite ellipse onto earth*
    - ***Status: DONE - Carlos***
  + **XPrimeYPrime2XYLibrary.cpp/XPrimeYPrime2XYLibrary.h**
    - Purpose: *This library converts x and y prime coordinates to x and y coordinates*
    - ***Status: DONE - Carlos***
  + **EdgeEllipseLibrary.cpp/EdgeEllipseLibrary.h**
    - Purpose: *This library determines edge of an ellipse with polygon approx. every 30 deg, counterclockwise from x axis*
    - ***Status: DONE - Carlos***
  + **EllipseViewLibrary.cpp/EllipseViewLibrary.h**
    - Purpose: *This library gives a primitive view of ellipse*
    - ***Status: DONE - Carlos***
  + **AngleDiffStationKeepingLibrary.cpp/AngleDiffStationKeepingLibrary.h**
    - Purpose: *This library calculates angle differences to take care of the station keeping error*
    - ***Status: DONE - Carlos***
  + **ConvexLibrary.cpp/ConvexLibrary.h**
    - Purpose: *This library deletes points from an arbitrary set of points to produce a convex set*
    - ***Status: DONE - Carlos***
  + **FindColinearPointLibrary.cpp/FindColinearPointLibrary.h (BETWEEN)**
    - Purpose: *This library determines which one of three colinear points lies between the other two.*
    - ***Status: DONE (Abhi) - Carlos***
  + **CenterGravityLibrary.cpp/CenterGravityLibrary.h**
    - Purpose: *This library determines the center of gravity (theta and phi)*
    - ***Status: DONE (Carlos)***
  + **UpdateLongitudeLibrary.cpp/ UpdateLongitudeLibrary.h**
    - Purpose: *This library updated the longitudes of the stations*
    - ***Status: DONE (Carlos)***