CIFP database

1. Information in the database (only include part of the CIFP info)
   1. Airspace
   2. Airway and route
   3. Approach
   4. Area
   5. Runway
   6. SID
   7. STAR
   8. Waypoint
2. Tables in the database
   1. Airspace
      1. Airspaces
   2. Airway and route
      1. AirwayRoutes
   3. Approach
      1. Approaches
      2. ApproachesBLOB
   4. Area
      1. Area
   5. Runway
      1. Runways
   6. SID
      1. SIDs
   7. STAR
      1. AirportsSTARs
      2. STARs
      3. STARsBLOB
   8. Waypoint
      1. Waypoints
3. Table column info
   1. Airspace
      1. Airspaces
         1. AreaID (corresponds to table ‘Area’)
         2. AirportCode (airport ICAO)
         3. Type (Controlled/ restrictive)
         4. SubType (classification of the airspace)
         5. RankOrder (order to connect the point)
         6. Latitude
         7. Longitude
         8. PointState (Polygon Start/NULL/Polygon End)
         9. BoundaryType (Great Circle/Arc…)
         10. ArcLatitude (set the center of the arc)
         11. ArcLongitude (set the center of the arc)
         12. LowerLimit
         13. LowerLimitUnit
         14. UpperLimit
         15. UpperLimitUnit
         16. ArcDistance (radius of the arc)
         17. ArcBearing
         18. ori\_geom **(BLOB object)**
             1. BLOB type : POINTZ
             2. X: Longitude (col 7)
             3. Y: Latitude (col 6)
             4. Z: N/A (-999)
         19. arc\_geom **(BLOB object)**
             1. BLOB type : POINTZ
             2. X: ArcLongitude (col 11)
             3. Y: ArcLatitude (col 10)
             4. Z: N/A (-999)
   2. Airway and route
      1. AirwayRoutes
         1. Id (id for the airway and route)
         2. AreaID (corresponds to table ‘Area’)
         3. AirwayName
         4. WaypointID (corresponds to table ‘Waypoints’)
         5. RankOrder (order to connect the point)
         6. Altitude (in ft)
         7. MagneticHeading
         8. Distance (distance between this point to the next point)
   3. Approach
      1. Approaches
         1. AreaID (corresponds to table ‘Area’)
         2. AirportCode (airport ICAO)
         3. ApproacheType (RNAV/ILS/VOR/LOC…)
         4. IlsSub (sub name for ILS approach)
         5. SubName (sub name for the approach -> related to which waypoint the approach start)
         6. ApproachRunway (runway name,N/A,Miss=miss approach)
         7. RouteType (Approach Transition; RNAV,ILS,LOC…=final approach)
         8. TurningDirection (-999= NA, 0 = Left, 1 = Right)
         9. PathType (initial fix, track to fix ….etc)
         10. PathID (a number assign to the PathType, don’t have a separate table, doing this for the BLOB table)
         11. ApproachGroup (Approach route/ Final Approaches/ Miss Approaches)
         12. WaypointID (corresponds to table ‘Waypoints’)
         13. RankOrder (order to connect the point)
         14. Altitude (in ft)
         15. Theta (inbound angle)
         16. Rho (Distance to the DME station)
         17. MagneticHeading (outbound angle)
         18. RouteDistance (distance to the next point)
      2. ApproachesBLOB
         1. AreaID (corresponds to table ‘Area’)
         2. AirportCode (airport ICAO)
         3. ApproacheType (RNAV/ILS/VOR/LOC…)
         4. IlsSub (sub name for ILS approach)
         5. RouteType (Approach Transition; RNAV,ILS,LOC…=final approach)
         6. ApproachRunway (runway name,N/A,Miss=miss approach)
         7. Frequency (channel frequency for all the approaches except for RNAV)
         8. APCH\_BLOB1 **(BLOB object)**
            1. BLOB type: LINESTRINGZM
            2. X: WaypointID (col 12 in table ‘Approaches’)
            3. Y: PathID (col 10 in table ‘Approaches’)
            4. Z: Altitude (col 14 in table ‘Approahces’)
            5. M: TurningDirection (col 8 in table ‘Approahces’)
         9. APCH\_BLOB2 **(BLOB object)**
            1. BLOB type: LINESTRINGZM
            2. X: Theta (col 15 in table ‘Approaches’)
            3. Y: Rho (col 16 in table ‘Approaches’)
            4. Z: MagneticHeading (col 17 in table ‘Approahces’)
            5. M: RouteDistance (col 18 in table ‘Approahces’)
   4. Area
      1. Area (6 area of the world divided by CIFP file)
         1. AreaID (a number assign to the Area, total 6: 0~5)
         2. AreaName (CAN, EEU, LAM, PAC, SPA, USA)
   5. Runway
      1. Runways
         1. AreaID (corresponds to table ‘Area’)
         2. AirportCode (airport ICAO)
         3. RunwayName
         4. RunwayLength
         5. RunwayWidth
         6. MagneticHeading
         7. Latitude
         8. Longitude
         9. Elevation
         10. geom **(BLOB object)**
             1. BLOB type: POINTZ
             2. X: Longitude (col 8)
             3. Y: Latitude (col 7)
             4. Z: 0 (<- need to fix, put -999)
   6. SID
      1. SIDs
         1. SIDsID (id for SID)
         2. AreaID (corresponds to table ‘Area’)
         3. AirportCode (airport ICAO)
         4. ProcedureName
         5. TakeoffRunway
         6. MagneticHeading
         7. RouteType (Feeder/SID)
         8. WaypointID (corresponds to table ‘Waypoints’)
         9. LegType (Initial Fix/Track to a Fix…)
         10. RankOrder (order to connect the point)
         11. MinAlt (minimum altitude, in ft)
         12. MaxAlt (maximum altitude, in ft)
         13. Speed
   7. STAR
      1. AirportsSTARs (Airports and the STARs for that airport)
         1. AirportCode (airport ICAO)
         2. ProcedureName (STAR name)
      2. STARs
         1. ProcedureName (STAR name)
         2. WaypointID (corresponds to table ‘Waypoints’)
         3. ProcedureType (Feeder/runway transition)
         4. ArrivingRunway
         5. RankOrder (order to connect the point)
         6. LegType (Initial Fix/Track to a Fix…)
         7. MagneticHeading
         8. MinAlt (minimum altitude, in ft)
         9. MaxAlt (maximum altitude, in ft)
         10. Speed
      3. STARsBLOB
         1. ProcedureName (STAR name)
         2. ProcedureType (Feeder/runway transition)
         3. ArrivingRunway
         4. Route\_BLOB **(BLOB object)**
            1. LINESTRINGZM
            2. X: WaypointID (col 2 in table ‘STARs’)
            3. Y: MagneticHeading (col 7 in table ‘STARs’)
            4. Z: MinAlt (col 8 in table ‘STARs’)
            5. M: MaxAlt (col 9 in table ‘STARs’)
   8. Waypoint
      1. Waypoints
         1. WaypointID (a number assign to waypoint)
         2. AreaID (corresponds to table ‘Area’)
         3. WaypointName
         4. WaypointType (D,DB,EAENRT)
         5. Longitude
         6. Latitude
         7. geom **(BLOB object)**
            1. BLOB type: POINTZ
            2. X: Longitude (col 5)
            3. Y: Latitude (col 6)
            4. Z: N/A (-999)
4. CIFP data classification (the location of that letter in the CIFP, if in C++, all number -1)
   1. Airspace (5th:U)
   2. Airway and route (5th:E, 6th:R)
   3. Approach (5th:P, 13th: F)
   4. Area (2~4th = area code)
   5. Runway (5th:P, 13th: G)
   6. SID (5th:P, 13th: D)
   7. STAR(5th:P, 13th: E)
   8. Waypoint
      1. Airport Terminal point(5th:P, 13th: C)
      2. NDB station point (5th:D)
      3. Endurance point (5th:E 6th:A 7th:E 8th:N 9th:R 10th:T)