import rhinoscriptsyntax as rs

import random as rnd

#get a point

centorid = rs.AddPoint((0,0,0))

#generate a random radius

radius = rnd.randint(10,20)

#draw a circle

circle = rs.AddCircle(centorid,radius)

#divide the circle

pts = rs.DivideCurve(circle,10,False,True)

#draw lines and midpoints on lines

lines = []

midPoints = []

for pt in pts:

       line = rs.AddLine(centorid,pt)

       #hide lines

       rs.HideObject(line)

       lines.append(line)

       midPoint = rs.CurveMidPoint(line)

       midPoints.append(midPoint)

#shift midpoint

midPoints.append(midPoints.pop(0))

#draw curves

for i in range(len(lines)):

       rs.AddCurve((pts[i],midPoints[i],centorid),3)

#hide centorid and circle

rs.HideObject(centorid)

rs.HideObject(circle)