MID POINT CIRCLE ALGORITHM

ALGORITHM

1. In this the input radius **r** is there with a centre **(xc , yc)**. To obtain the first point **m** the circumference of a circle is centered on the origin as **(x0,y0) = (0,r)**.
2. Calculate the initial decision parameters which are:  
   **p0 =5/4-r or 1-r**
3. Now at each **xk** position starting **k=0**, perform the following task.  
   if **pk < 0** then plotting point will be **( xk+1 ,yk)** and  
   **Pk+1=pk +2(xk+1) +1**  
   else the next point along the circle is (xk+1, yk-1) and  
   **Pk+1=pk+2(xk+1) +1-2(yk+1)**
4. Determine the symmetry points in the other quadrants.
5. Now move at each point by the given centre that is:  
   **x=x+xc**  
   **y=y+yc**
6. At last repeat steps from 3 to 5 until the condition **x>=y**.