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Program 3 \Rightarrow algorithm.

Step 1 \Rightarrow START

Step 2 \Rightarrow Declare P, Q, x, y, r, d variable P, Q are coordinates of The Centre of the Circle r is the radius of Circle.

Step 3 \Rightarrow Enter the value of r .

Step 4 \Rightarrow Calculate $d = 3 - 2r$

Step 5 \Rightarrow Initialize $x = 0$

& $nb sy = r$.

Step 6 \Rightarrow check if the whole circle is scan converted i.e. if $x \geq y$

STOP

Step 7 \Rightarrow Plot eight Points by using Concepts of 8 way Symmetry. The Centre is at (P, Q) current active pixel is (x, y) .

put pixel ($x+p$, $y+q$)
 put pixel ($y+p$, $x+q$)
 put pixel ($-y+p$, $x+q$)
 put pixel ($-x+p$, $y+q$)
 put pixel ($-x+p$, $-y+q$)
 put pixel ($-x+p$, $-x+q$)
 put pixel ($y+p$, $-x+q$)
 put pixel ($x+p$, $-y-q$)

step 8 \Rightarrow find location of the next pixels to be scanned.

if $d < 0$

Then $d = d + 4x + 6$

increment $x = x + 1$

If $d = 0$

Then $d = d + 4(x - y) + 10$

increment $x = x + 1$

decrement $y = y - 1$

step 9 \rightarrow Go to step 6

step 10 \Rightarrow stop.

Enter radius of circle
70

