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Set - C

P2: Mid point Circle Drawing Algorithm

Step 1: Start

Step 2: Put $x = 0, y = r$ and $p = 1 - r$

Step 3: Repeat while $x < = y$

Plot (x, y)

If ($p <= 0$)

Then set $y = y + 1$;

$p = p + 2 * y + 1$

else if ($p > 0$)

Then set $x = x - 1$

$p = p - 2 * x + 1$

Step 4: Populate other 7 Quadrants accordingly

Step 5: End

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P2 Code : mid Point Circle Drawing Algorithm

```
#include <stdio.h>
#include <graphics.h>
void draw( int xo, int yo, int radius ) {
 int x = radius;
 int y = 0;
 int e = 0;
 while (x>=y) {
 putpixel (xo+x, yo+y, 7);
 putpixel (xo+y, yo+x, 7);
 putpixel (xo-y, yo+x, 7);
 putpixel (xo-x, yo+y, 7);
 putpixel (xo-x, yo-y, 7);
 putpixel (xo-y, yo-x, 7);
 putpixel (xo+y, yo-x, 7);
 putpixel (xo+x, yo-y, 7);
 if (e<=0)
 { y+=1;
   e+= 2*y +1;}
 if (e > 0)
   {
     x=x-1;
     e=e - 2*x+1;
   }
  }
}
int main() {
int gd=DETECT, gm, e, x, y, r;
initgraph (&gd, &gm, " ");
printf (" Enter radius: ");
scanf ("%d", &r);
printf ("Enter coordinates of center :");
scanf ("%d %d", &x, &y);
draw (x, y, r);
 return 0;
}
```