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Class - SE -AI&DS- C1

Roll No - 20

// Cpp-program for circle drawing using Bresenham's Algorithm in computer-graphics

```
#include <graphics.h>
```

```
void drawCircle(int xc, int yc, int x, int y)
```

```
{
    putpixel(xc+x, yc+y, RED);
    putpixel(xc-x, yc+y, RED);
    putpixel(xc+x, yc-y, RED);
    putpixel(xc-x, yc-y, RED);
    putpixel(xc+y, yc+x, RED);
    putpixel(xc-y, yc+x, RED);
    putpixel(xc+y, yc-x, RED);
    putpixel(xc-y, yc-x, RED);
}
```

```
void circleBres(int xc, int yc, int r)
```

```
{
    int x = 0, y = r;
    int d = 3 - 2 * r;
    drawCircle(xc, yc, x, y);
    while (y >= x)
    {
        x++;
        if (d > 0)
        {
            y--;
            d = d + 4 * (x - y) + 10;
        }
        else
            d = d + 4 * x + 6;
        drawCircle(xc, yc, x, y);
        delay(50);
    }
}
```

```
int main()
```

```
{
    int xc = 50, yc = 50, r = 30;
    int gd = DETECT, gm;
    initgraph(&gd, &gm, NULL);
    circleBres(xc, yc, r);
    delay(50000);
    return 0;
}
```

COMMAND:

```
(base) oem@ubuntu6:~$ gcc circle.cpp -o circle -lgraph  
(base) oem@ubuntu6:~$ ./circle
```

OUTPUT:

