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P1: Write an algorithm and program to implement floodfill algorithm using 8 connected approach

```
#include <stdio.h>
#include <graphics.h>
#include <conio.h>
void floodfill (int x, int y, int old, int newcol)
{ int current;
  current = getpixel(x,y);
  if (current == old)
  { delay(5);
    putpixel (x, y, newcol);
    floodfill (x+1, y, old, newcol);
    floodfill (x-1, y, old, newcol);
    floodfill (x, y-1, old, newcol);
    floodfill (x+1, y+1, old, newcol);
    floodfill (x-1, y+1, old, newcol);
    floodfill (x+1, y-1, old, newcol);
    floodfill (x-1, y-1, old, newcol);
  }
}
void main()
{ int gd=DETECT, gm;
  initgraph (&gd, &gm, " ");
  rectangle (50, 50, 150, 150);
  floodfill (70, 70, 0, 15);
  getch();
  closegraph();
}
```

Algorithm:

floodfill (x, y, oldcolor, newcolor)

1) If x or y is outside the screen, then return.
2) If color of getpixel (x, y) is same as old color, then
3) ~~Return~~ for top
3) Recur for.

floodfill (x, y, oldcolor, newcolor)
floodfill (x+1, y, oldcolor, newcolor)
floodfill (x-1, y, oldcolor, newcolor)
floodfill (x, y-1, oldcolor, newcolor)
floodfill (x+1, y+1, oldcolor, newcolor)
floodfill (x-1, y+1, oldcolor, newcolor)
floodfill (x+1, y-1, oldcolor, newcolor)
floodfill (x-1, y-1, oldcolor, newcolor).

Finish