END TERM PRACTICALS EXAM

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Course - BCA (B) VI Sem

Roll No - 1121130 (49)

Subject - Computer Graphics

Exam Type - Regular

Saurav

Q1 Flood fill Algorithm using 8 Connected Approach

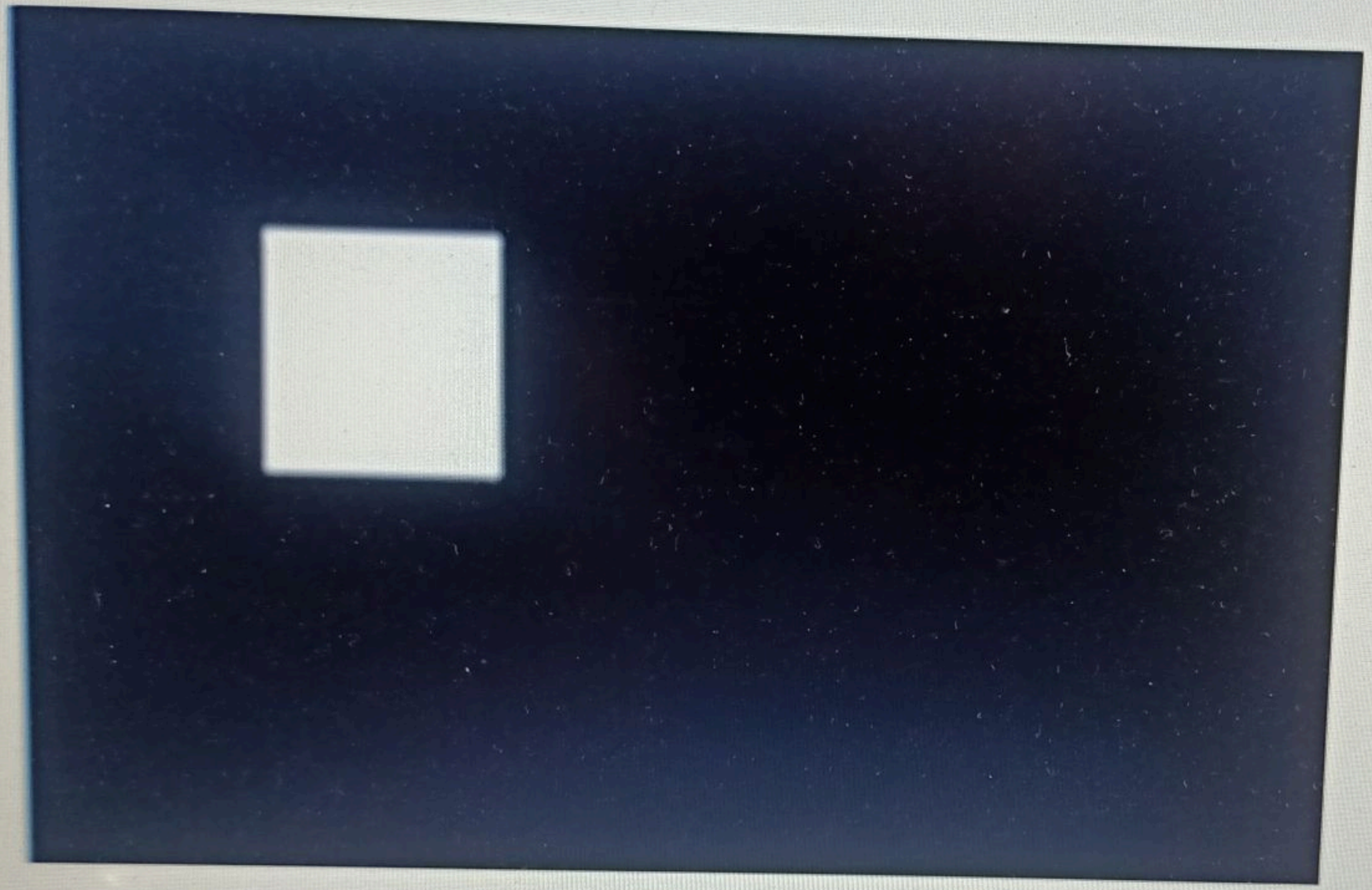
```
# include <stdio.h>
# include <graphics.h>
# include <dos.h>
# include <conio.h>
void floodfill(int x, int y, int old, int new)
{
    int current;
    current = getpixel(x,y);
    if (current == old)
    {
        delay(5);
        putpixel(x,y,new);
        floodfill(x+1, y, old, new);
        floodfill(x-1, y, old, new);
        floodfill(x, y+1, old, new);
        floodfill(x, y-1, old, new);
        floodfill(x+1, y+1, old, new);
        floodfill(x-1, y+1, old, new);
        floodfill(x+1, y-1, old, new);
        floodfill(x-1, y-1, old, new);
    }
}
```

Bhavay

```
void main()
{
   int gd = DETECT, gm;
   initgraph (&gd, &gm, " ");
   rectangle (50, 50, 150, 150);
   floodfill (70, 70, 0, 15);
   getch();
   closegraph();
}
```

Bauray

Output:



b) Algorithm for flood fill Algorithm

Step 1 - Start

Step 2 - Initialize the value of seed point (x, y) old, new

Step 3 - Define the boundary values of rectangle

Step 4 - Check if the current seed point is of default color then repeat the steps 5 and 6 till the boundary pixels reached

Step 5 - Change the default color with the fill color at the seed point

SetPixel Putpixel (x, y, new)

Step 6 - Recursively follow the procedure with 4 neighbourhood point

floodfill (x+1, y, old, new)
floodfill (x-1, y, old, new)
floodfill (x, y+1, old, new)
floodfill (x, y-1, old, new)
floodfill (x+1, y+1, old, new)
floodfill (x-1, y+1, old, new)
floodfill (x+1, y-1, old, new)
floodfill (x-1, y-1, old, new)

Step 7 - Stop

Bauraj