

BITS Pilani, K. K. Birla Goa Campus

Semester 1 2014-15

IS F311 Computer Graphics

Date: 14/10/2014

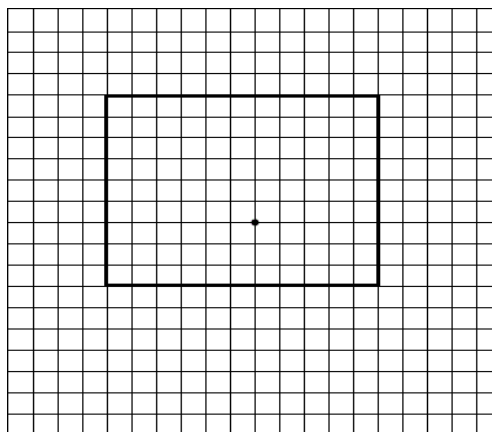
- 1) Start with a grid (100 x 100)
- 2) Take an input for selecting a Rectangle which is a part of the grid
- 3) Take an input of a grid point
 - I. If the point is outside the rectangle
 - Say it is outside the rectangle
 - Stop the program
 - II. If the point is inside the rectangle
 - Start the main algorithm

MAIN ALGORITHM

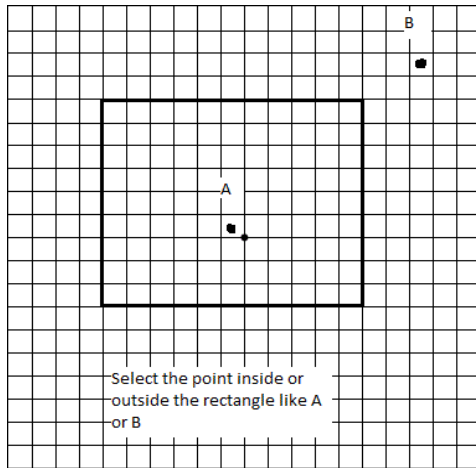
Note: In every iteration (point to be filled), change the filling Red color by ΔX .
($255 - k * \Delta X$, 0, 0), is the color to be filled in the k^{th} iteration. This will change the gradient of red color.

- 1) Maintain an array of points to be colored next and a pointer for the points which are already colored
- 2) Find the next point from the array whose neighboring points from the grid are to be colored next
- 3) Fill those pixels with same color if all neighboring points are within rectangle and not colored before
- 4) Repeat the same procedure till the rectangle is fully filled

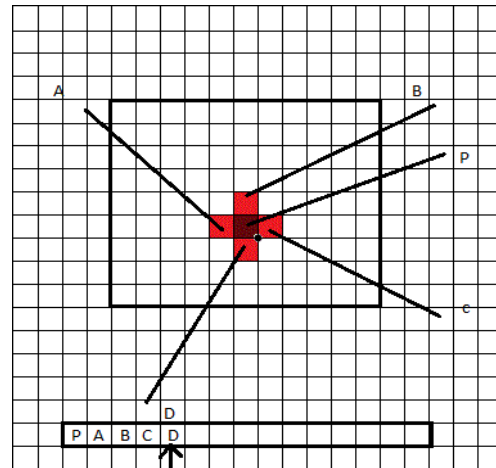
Example:



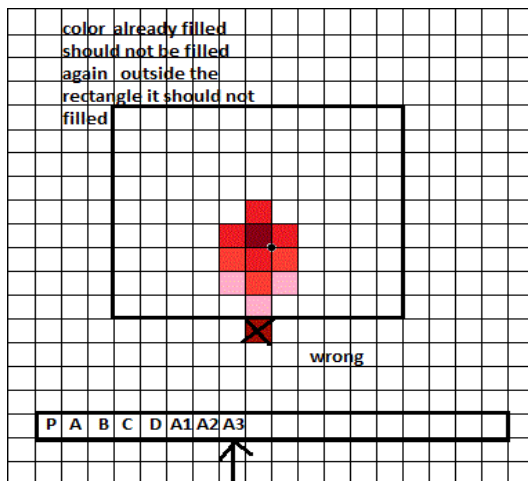
Rectangle in the grid



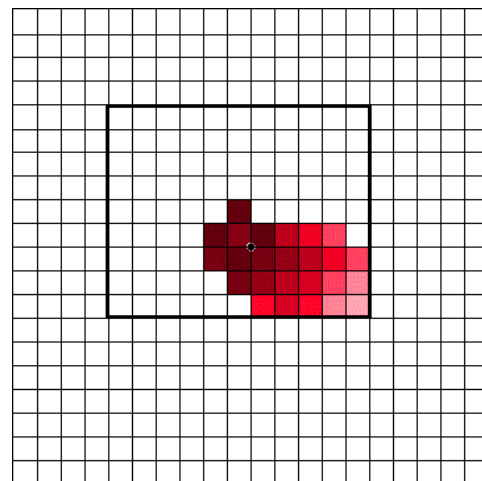
Point in rectangle or outside the rectangle



Next to be colored elements in array



Array contents



Constraints:

1. Don't fill pixels which are outside the rectangle
2. Don't fill colored pixel again