

(RCA-551) Computer Graphics & Animation

ASSIGNMENT

Aim: Write an algorithm to perform Two-dimensional Translation on a Point.

Two-dimensional Translation on a Point Algorithm:

Step 1. Make a 2x2 scaling matrix S as:

$$S \begin{matrix} x & 0 \\ 0 & Sy \end{matrix}$$

Step 2. For each point of the polygon.

(i) Make a 2x1 matrix P , where $P[0][0]$ equals to x coordinate of the point and $P[1][0]$ equals to y coordinate of the point.

(ii) Multiply scaling matrix S with point matrix P to get the new coordinate.

$$x' = x + tx \quad y' = y + ty$$

Step 3. Draw the polygon using new coordinates.