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FACULTY OF ENGINEERING & TECHNOLOGY

BCS -504 Computer Graphics & Multimedia

Lecture-11

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OUTLINE

- Rotation

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Rotation

It is a process of changing the angle of the object. Rotation can be clockwise or anticlockwise. For rotation, we have to specify the angle of rotation and rotation point. Rotation point is also called a pivot point. It is print about which object is rotated.

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Types of Rotation:

1. Anticlockwise

2. Counterclockwise

The positive value of the pivot point (rotation angle) rotates an object in a counter-clockwise (anti-clockwise) direction.

The negative value of the pivot point (rotation angle) rotates an object in a clockwise direction.

Rotation

When the object is rotated, then every point of the object is rotated by the same angle.

Straight Line: Straight Line is rotated by the endpoints with the same angle and redrawing the line between new endpoints.

Polygon: Polygon is rotated by shifting every vertex using the same rotational angle.

Curved Lines: Curved Lines are rotated by repositioning of all points and drawing of the curve at new positions.

Circle: It can be obtained by center position by the specified angle.

Ellipse: Its rotation can be obtained by rotating major and minor axis of an ellipse by the desired angle.

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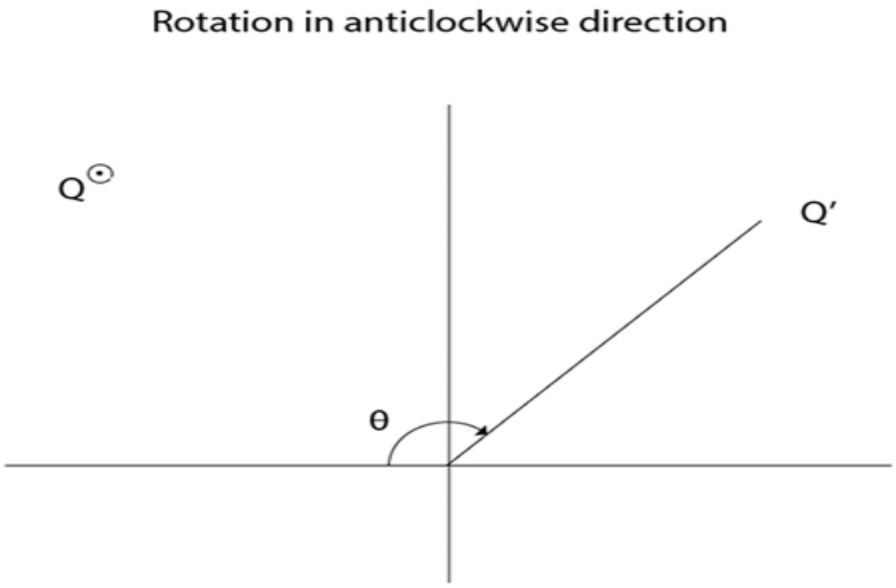
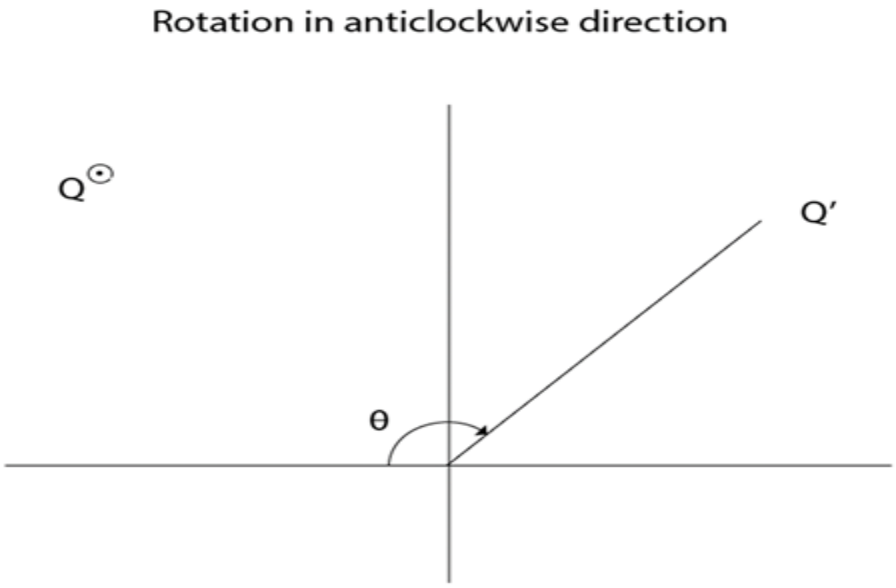
Rotation



Q is original position
Q ' is final rotated position

Rotation



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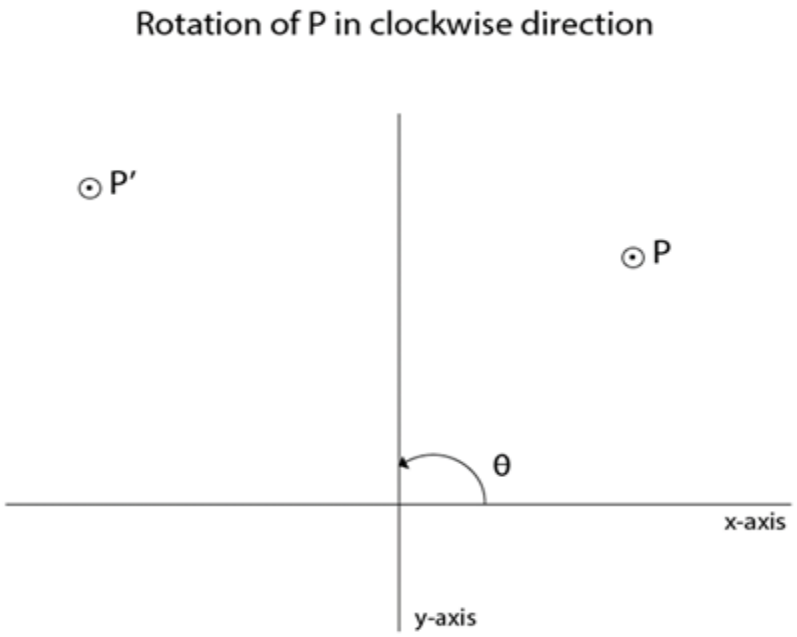

P is original Position
P' is final position or position after rotation
where θ is angle of rotation

Rotation

Rotation about an arbitrary point: If we want to rotate an object or point about an arbitrary point, first of all, we translate the point about which we want to rotate to the origin. Then rotate point or object about the origin, and at the end, we again translate it to the original place. We get rotation about an arbitrary point.

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Multiple Choice Question

MUTIPLE CHOICE QUESTIONS:

Sr no	Question	Option A	Option B	OptionC	OptionD
1	CRT has three phosphor color dots at each pixel position. One dot for red, one for green and one for blue light. This is commonly known as ……...	Point Triangle	Triangle	Dot Triangle	pivot Triangle
2	how many electron guns present in CRT , one for each color dotand in which shadow mask grid just behind the phosphor coated screen	1	3	2	b&c
3	How many electron beams will use in shadow mask?	3	2	1	a &c
4	Which technique is generally used in raster scan display including color TV	mask technique	shadow mask technique	raster Scan technique	morphing
5	How many electron beams will used in shadow mask CRT?	1	3	4	2

REFERENCES

- http://www.engppt.com/search/label/Computer%20Graphics