Introduction to Computer Graphics.

## THEORY:

Computer Graphics is the field of science that deals with the generation, storage & manipulation of images by using computer.

Circle: It is a round plane figure whose boundary consist of points equidistant from a fixed point (the centre).

Animation: It is a method in which pictures are manipulated to appear as moving images. The different keywords associated with computer graphics are listed below:

<GRAPHICS.H>: It is the library for graphics associated keywords.

initgraph: It initializes the graphic system by loading a graphics driver from disk then putting the system into graphics mode.

It's arguements are:

• graphdriver: It is an integer that specifies the graphics driver to be used

• graphmode: It is the integer that specifies the initial graphics mode.

Graphresult(): It returns an error code for the last unsuccessful graphics operation.

Setcolour (): It sets the current drawing color.

getcolor (): It returns the current drawing color.

circle (midx, midy, radius): This instruction is used to draw a circle in the current drawing color

-midx specifies the x-coordinate.

-midy specifies the y-coordinate

-radius specifies the radius of the circle.

delay (n):

-This instruction suspends the execution for certain interval

-n is the integer value of the interval in milliseconds

Closegraph (C):

-It shuts down the graphic system.

-It deallocates all memory allocated by the graphics system.

grapherrormsg (): It returns a pointer to an error message string.

Set max color (): It returns maximum color value

clear device (): It clears the graphics screen.

<DOS.H>: This header file contains function for handling interrupts, producing sound, date and time functions, etc.

## Output:

The output is a graphical representation of a stickman moving its arms and legs along the x-axis. The body would typically be a vertical line, the arms would be horizontal lines attached to the body at the shoulders, and the legs would be vertical lines attached to the body at the hips. Overall, the output would be a dynamic representation of a stickman character moving its arms and legs in response to changes in the x and y co-ordinate in for loop.

## Discussion

In this program, we moved a circle in a loop by changing its x-coordinate and y-coordinate. Header files <GRAPHICS.H> was used to use the graphics related function in the program as <DOS.H> to use delay() function. Circle (midx, midy radius) function was used to draw & the program and midx and midy was changed. Cleardevice() function was used in the program to clear the previous output and draw a new circle in blank space.

## Conclusion:

Hence, in this lab, we learnt about computer graphics, plotted a circle and created a stickman. We used it to move around the screen.