WORKSHEET 1

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Section/Group: KRG_IOT-1-A	**Semester: 6th Semester**
Branch: BE-CSE	**Date of Performance: 09/01/2025**
Subject Name: Computer Graphics with Lab	**Subject Code: 22CSH-352**

Aim: Demonstrate the use of graphics.h functions to draw basic shapes like lines, triangles, and circles.

Objective: Demonstrate the use of graphics.h functions to draw basic shapes like lines, triangles, and circles.

Algorithm:
1. **Initialize Graphics Mode:**
   - Include the graphics.h header.
   - Use the initgraph() function to initialize the graphics mode.

2. **Draw a Line:**
   - Use the line(x1, y1, x2, y2) function to draw a straight line between two points (x1, y1) and (x2, y2).

3. **Draw a Triangle:**
   - Use the line() function thrice to draw three sides of the triangle by connecting its vertices.

4. **Draw a Circle:**
   - Use the circle(x, y, radius) function to draw a circle with the center at (x, y) and a specified radius.

5. **Display Graphics:**
   - Use the getch() function to wait for a key press to keep the graphics window open.

6. **Close Graphics Mode:**
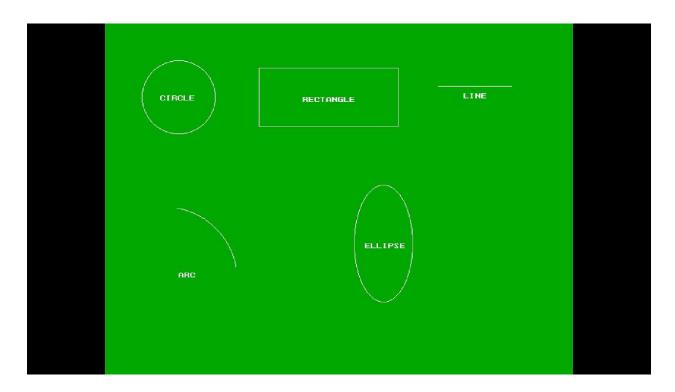   - Use the closegraph() function to close the graphics mode and clean up resources

Implementation/Code:

```
#include<iostream.h>
#include<conio.h>
#include<graphics.h>
void main()
{
clrscr(); // Clear screen
int gd = DETECT, gm; // Graphics driver and mode
initgraph(&gd, &gm, "C:\\TURBOC3\\BGI"); // Initialize graphics mode
setbkcolor(2); // Set background color
// Drawing a circle
circle(100, 100, 50);
outtextxy(75, 98, "CIRCLE");
// Drawing a rectangle
rectangle(210, 60, 400, 140);
outtextxy(270, 100, "RECTANGLE");
// Drawing a line
line(455, 85, 555, 85);
outtextxy(490, 95, "LINE");
// Drawing an arc
arc(80, 350, 10, 80, 100);
outtextxy(100, 340, "ARC");
// Drawing an ellipse
ellipse(380, 300, 0, 360, 40, 80);
outtextxy(355, 300, "ELLIPSE");
```

getch(); // Wait for user input

closegraph(); // Close the graphics mode

}

Output:

Learning Outcomes

- Utilize the graphics.h library in C++ to implement fundamental graphical elements.
- Effectively initialize and terminate graphics mode in programs.
- Develop skills to position and display text relative to shapes using outtextxy.
- Demonstrate the creation of basic shapes, including lines, circles, rectangles, arcs, and ellipses.Develop skills to position and display text relative to shapes using outtextxy.
- Establish a foundation in computer graphics to support learning advanced topics.