Aim: To develop programs for making animations such as

1. Circle moving from top to down and vice versa

Objective:

Draw an object and apply various transformation techniques to this object. Translation, scaling and rotation is applied to object to perform animation.

Theory:

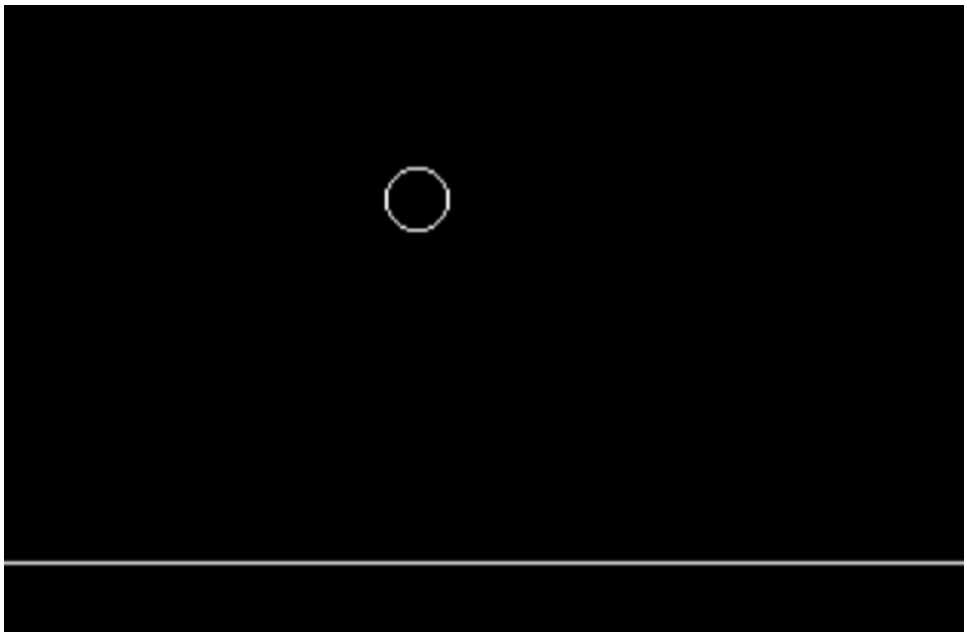
- For moving any object, we incrementally calculate the object coordinates and redraw the picture to give a feel of animation by using for loop.
- Suppose if we want to move a circle from left to right means, we have to shift the position of circle along x-direction continuously in regular intervals.
- The below programs illustrate the movement of objects by using for loop and also using transformations like rotation, translation etc.
- For windmill rotation, we use 2D rotation concept and formulas.

Program:

```
#include<stdio.h>
#include<conio.h>

#include<graphics.h>

void main()

{

int gd=DETECT,gm,i,x=0;

initgraph(&gd,&gm,"C:\\TURBOC3\\BGI");

for(i=0;i<=300;i++)

{

line(0,310,600,310);

circle(i,i,10);
```

```
delay(8);
cleardevice();
}
for(i=300;i>=0;i--);
{
line(0,310,600,310);
x++;
circle(300+x,i,10);
delay(7);
cleardevice();
}
getch();
}
```

Output:



Conclusion - Comment on :

1. Importance of story building
2. Defining the basic character of story
3. Apply techniques to these characters

Course Project - Mini project to perform using C/C++/Java/OpenGL/Blender/Any other tool [2/3 students per grp].

Objective: Study of the different graphics environment and identify any one environment to design the graphics project. Write a story, generate and define the character or object for story and apply different methods to object or character

Report:

Conclusion: Comment on-

1. Graphics environment :- A graphics environment refers to the digital or virtual space in which graphical elements, such as images, videos, and user interface components, are displayed and manipulated on a computer or other digital device.
2. Functionality offered:- Computer graphics offer a wide range of functionality that is essential for creating, manipulating, and displaying visual content on digital devices. Here are some of the key functionalities offered in computer graphics:
3. Character or Object:-Characters and objects play a fundamental role in computer graphics, as they are the building blocks of digital visual content. Whether in 2D or 3D graphics, characters and objects are essential elements that contribute to storytelling, user interaction, and the overall aesthetics of digital media.