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GROUP C : PRATICAL.7

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PROBLEM STATEMENT:

Write a C++ program to implement bouncing ball using sine wave form. Apply the concept of polymorphism.

CODE:

```
#include<iostream>
#include<graphics.h>
#include<math.h>
using namespace std;
class poly                                //class for polygon drawing
{
public:
float x=1,y=0.00000,j=0.5,count=0.1;
float r=15;
void draw(int a, int b, int c, int d)    //function to draw the line
{
setcolor(14);                            //line color
line(a,b,c,d);                          //line coordinates
sleep(1);
}
void draw()                              //drawing ball

{
for(int k=0;k<=5;k++)
{
for(float i=90;i<270;i+=10)
{
y=cos(((i*22/7)/180))/j;                //converting theta into degrees
if(y>0)
y=-y;                                  //decreasing y coordinates for ball coming down
```

```

x+=5;                                //increment x as ball moves
setcolor(14);
circle(x,y*100+200,r);
floodfill(x,y*100+200,14);
delay(200);
setcolor(0);
circle(x,y*100+200,r);
floodfill(x,y*100+200,0);
}
j+=count;
//count+=1;
}
}

};
int main()
{
int gd=DETECT,gm;
initgraph(&gd,&gm,NULL);

poly p;
p.draw(0,215,650,215);              //polymorphism
p.draw();
return 0;
}

```

OUTPUT:



