

/\*a) Write a C++ program to implement bouncing ball using sine wave form.  
Apply the concept of polymorphism.  
OR  
b) Write C++ program to draw man walking in the rain with an umbrella. Apply  
the concept of polymorphism.\*/

```
#include <stdio.h>
#include <graphics.h>
#include <dos.h>

int main() {
    int gd = DETECT, gm;
    int i, x, y, flag=0;
    initgraph(&gd, &gm, "C:\\\\TC\\\\BGI");

    /* get mid positions in x and y-axis */
    x = getmaxx()/2;
    y = 30;

    while (!kbhit()) {
        if(y >= getmaxy()-30 || y <= 30)
            flag = !flag;
        /* draws the gray board */
        setcolor(RED);
        setfillstyle(SOLID_FILL, RED);
        circle(x, y, 30);
        floodfill(x, y, RED);

        /* delay for 50 milli seconds */
        delay(50);

        /* clears screen */
        cleardevice();
        if(flag){
            y = y + 5;
        } else {
            y = y - 5;
        }

        closegraph();
        return 0;
    }
}
```