

# Имитация движения

Составить программу, которая имитирует движение  
автомобиля

```
uses GraphABC;
```

```
var
```

```
  x, y, w, h:integer;
```

```
  p, p1:picture;
```

```
Begin
```

```
  SetWindowSize(600,300);
```

```
  p:=new Picture('gorod.jpg');
```

```
  p1:=new Picture('avto.jpg');
```

```
  x:=0; y:=150; w:=240; h:=100;
```

```
while x<400 do
```

```
  Begin
```

```
    clearwindow;
```

```
    p.Draw(0,0);
```

```
    p1.Draw(x,y,w,h);
```

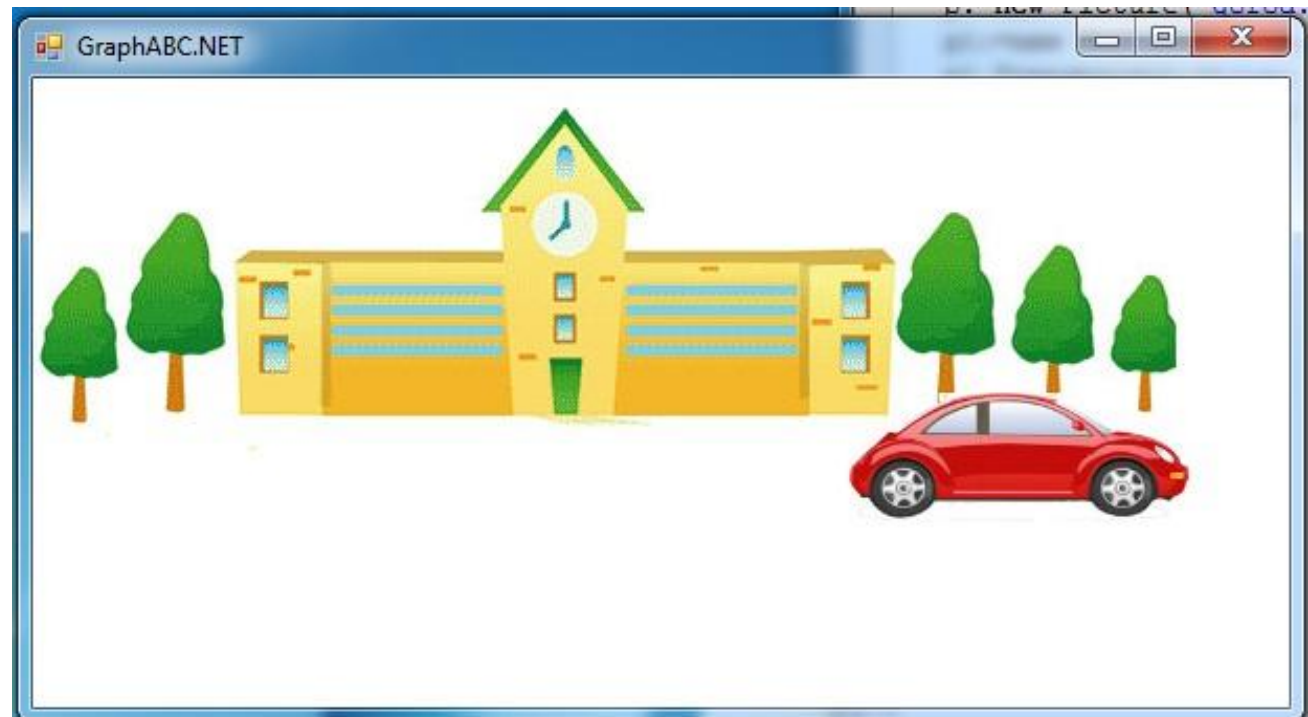
```
    x:=x+10;
```

```
    sleep(20);
```

```
    redraw;
```

```
  end;
```

```
end.
```

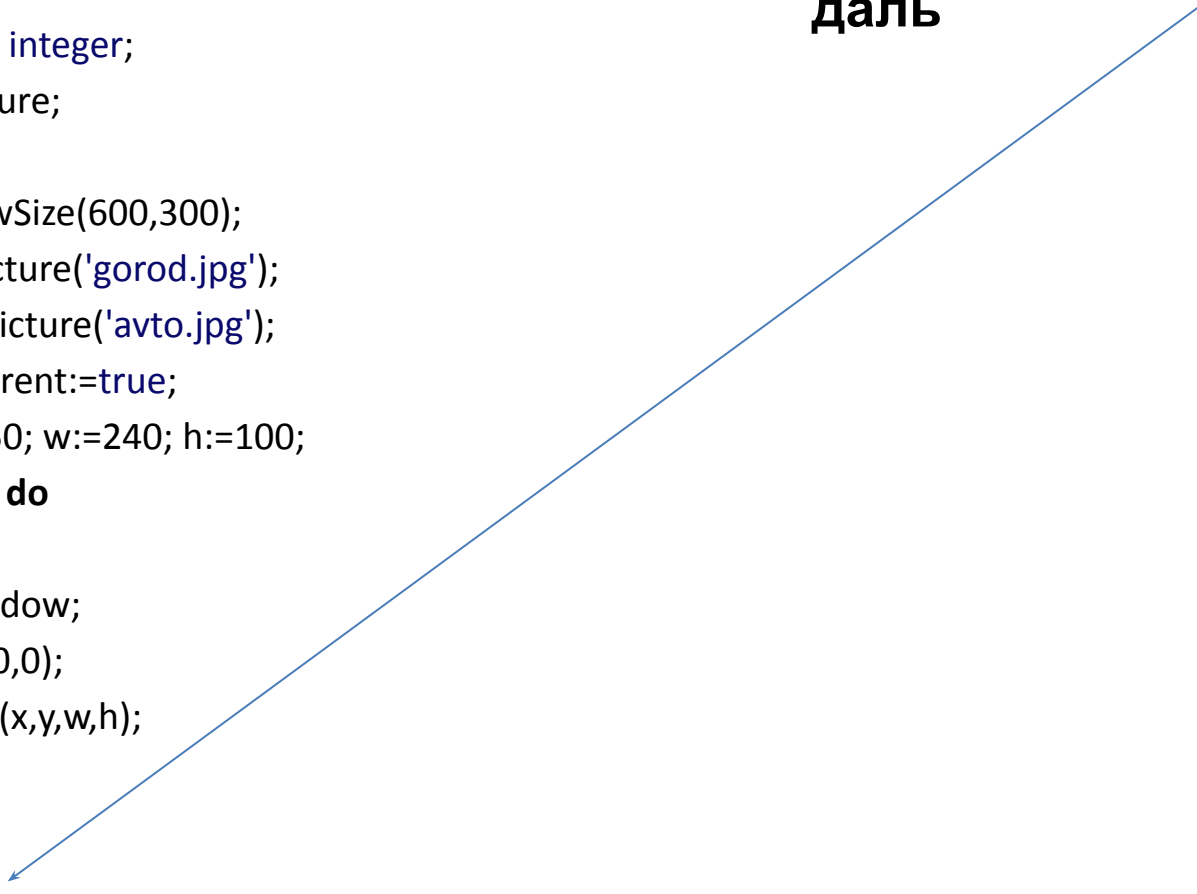


## Прозрачный фон картинки

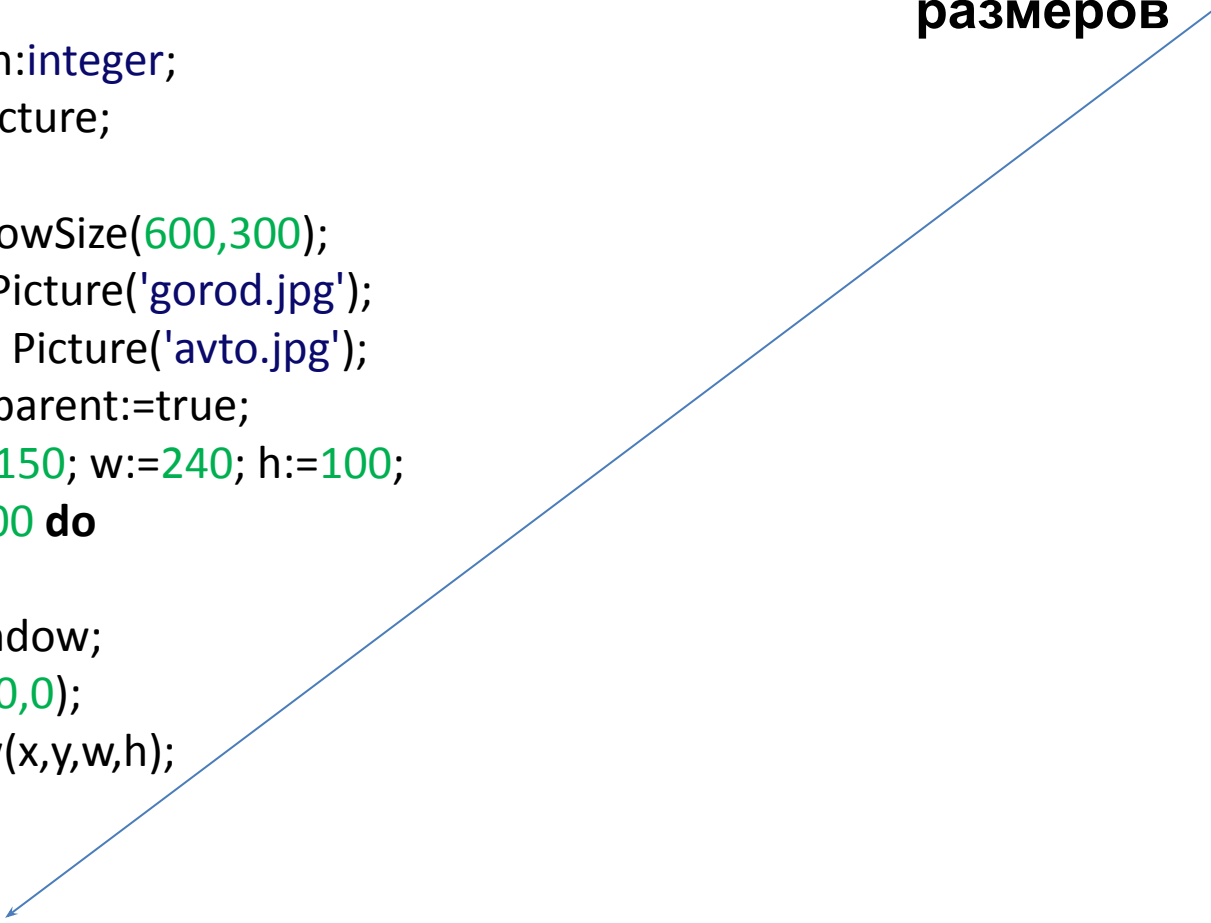
```
uses GraphABC;  
var  
    x, y, w, h:integer;  
    p, p1:picture;  
Begin  
    SetWindowSize(600,300);  
    p:=new Picture('gorod.jpg');  
    p1:=new Picture('avto.jpg');  
    p1.Transparent:=true;  
    x:=0; y:=150; w:=240; h:=100;  
while x<400 do  
    Begin  
        clearwindow;  
        p.Draw(0,0);  
        p1.Draw(x,y,w,h);  
        x:=x+10;  
        sleep(20);  
        redraw;  
    end;  
end.
```

## Иллюзия движения в даль

```
uses GraphABC;
var
  x, y, w, h : integer;
  p, p1:picture;
Begin
  SetWindowSize(600,300);
  p:=new Picture('gorod.jpg');
  p1:=new Picture('avto.jpg');
  p1.Transparent:=true;
  x:=0; y:=150; w:=240; h:=100;
while x<400 do
  Begin
    clearwindow;
    p.Draw(0,0);
    p1.Draw(x,y,w,h);
    x:=x+10;
    w:=w-2;
    h:=h-2;
    sleep(20);
    redraw;
  end;
end.
```



**Нет искажения  
размеров**



```
uses GraphABC;  
var  
  x, y, w, h:integer;  
  p, p1:picture;  
Begin  
  SetWindowSize(600,300);  
  p:=new Picture('gorod.jpg');  
  p1:=new Picture('avto.jpg');  
  p1.Transparent:=true;  
  x:=0; y:=150; w:=240; h:=100;  
while x<400 do  
  Begin  
    clearwindow;  
    p.Draw(0,0);  
    p1.Draw(x,y,w,h);  
    x:=x+10;  
    w:=w-2;  
    h:=h-1;  
    sleep(20);  
    redraw;  
  end;  
end.
```

Вращение луны вокруг земли по круговой орбите.

$$x=R*\cos(t), y=R*\sin(t), 0 < t < \pi$$

П

```
uses GraphABC;
var x,y,x0,y0,R,u:integer;
nebo,zem,luna:picture;
begin
SetWindowSize(600,400);
x0:=300; y0:=200; R:=160;
LockDrawing;
nebo:=new Picture('sky.jpg');
zem:=new Picture('earth.jpg');
luna:=new Picture('luna.jpg');
for u:=1 to 360 do
begin
nebo.Draw(0,0,600,400);
zem.Draw(200,120,200,200);
x:=Round(x0+R*cos(pi*u/180));
y:=Round(y0-R*sin(pi*u/180));
luna.Draw(x,y,50,50);
sleep(10);
Redraw;
end;
end.
```

Нет  
мерцания

## Бесконечное повторение

```
uses GraphABC;  
var x,y,x0,y0,R,u:integer;  
nebo,zem,luna:picture;  
begin  
SetWindowSize(600,400);  
x0:=300; y0:=200; R:=160;  
LockDrawing;  
nebo:=new Picture('sky.jpg');  
zem:=new Picture('earth.jpg');  
luna:=new Picture('luna.jpg');  
while true do  
  for u:=1 to 360 do  
    begin  
      nebo.Draw(0,0,600,400);  
      zem.Draw(200,120,200,200);  
      x:=Round(x0+R*cos(pi*u/180));  
      y:=Round(y0-R*sin(pi*u/180));  
      luna.Draw(x,y,50,50);  
      sleep(10);  
      Redraw;  
    end;  
  end.
```

