**Mini project of computer graphics.**

**Title of the project:** MOVING BICYCLE using graphics Programming in C.

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**Introduction:**

In C graphics, the graphics.h functions are used to draw different shapes like circles, rectangles, etc, display tex t(any message) in a different format (different fonts and colors). By using the functions in the header graphics.h, programs, animations, and different games can also be made. In this article, let’s discuss how to draw a moving cycle in C using graphics.

Pass the three arguments to the initgraph() function to initialize the graphics driver and graphics mode.Create the upper body of the cycle by drawing lines.Create the wheels of the cycle by drawing circles and choose the coordinates so that the wheels aligned just below the upper body of the cycle. The next step is to create the road by drawing lines and stone by drawing rectangles. Choose the coordinates so that the cycle is just above the road.Change the cycle’s position using a loop continuously so that it appears to be moving on the road.

**Scope of this project:**

Using computer graphics we can create fine and commercial art which include animation package, paint packages. This packages provide facilities for designing object shapes and specifying object motion. Cartoon drawing, painting, logo design can also be done. The following industries offer job opportunities for competent animators and related occupations such as art directors , entertainment developers, 3D animators, character artist, video frame animators, 3D modellers , concept artist, and so on: Advertising in print and on the internet.

This includes the responsibilities of both the designer and the employer. For example, the designer might have to do a competitor research before starting a big project like devising a brand image.

**ALGORITHM:**

step 1 : Declare the Various Integer Variables like maxx , cy.

Step 2: initialize the graphics system by using initgraph (& gd ,&gm, "C:\\ TURBO C3\\BGI")function.

Step 3: draw the shape of the bicyle , by using various functions like, line(), rectangle (),circle() etc.

Step 4: use delay() and cleardevice () funcion to show the transition.

Step 5: Repeat drawing the shape of the bicyle till value of 1< 600

Step 6: stop.

**Implementation:**

Functions used:

line(x1, y1, x2, y2): It is a function provided by graphics.h header file to draw a line. Here x1, y1 is the first coordinates of the line, and x2, y2 are the second coordinates of the line respectively.

circle(x, y, r): It is a function provided by graphics.h header file to draw a circle. The x, y are the center points of the circle and r is the radius of the circle.

rectangle(X1, Y1, X2, Y2): It is employed in the creation of a rectangle. The rectangle must be drawn using the coordinates of the left top and right bottom corners. The X-coordinate and Y-coordinate of the top left corner are X1 and Y1 and the X-coordinate and Y-coordinate of the bottom right corner are X2 and Y2 respectively.

delay(n): It is used to hold the program for a specific time period. Here n is the number of seconds you want to hold the program.

cleardevice(): It is used to clear the screen in graphic mode. It sets the position of the cursor to its initial position, that is, (0, 0) coordinates.

closegraph(): It is used to close the graph.

**PROGRAM CODE :**

/ C++ program to draw the moving

// cycle using computer graphics

#include <conio.h>

#include <dos.h>

#include <graphics.h>

#include <iostream.h>

// Driver code

int main()

{

int gd = DETECT, gm, i, a;

// Path of the program

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

// Move the cycle

for (i = 0; i < 600; i++)

{

// Upper body of cycle

line(50 + i, 405, 100 + i, 405);

line(75 + i, 375, 125 + i, 375);

line(50 + i, 405, 75 + i, 375);

line(100 + i, 405, 100 + i, 345);

line(150 + i, 405, 100 + i, 345);

line(75 + i, 345, 75 + i, 370);

line(70 + i, 370, 80 + i, 370);

line(80 + i, 345, 100 + i, 345);

// Wheel

circle(150 + i, 405, 30);

circle(50 + i, 405, 30);

// Road

line(0, 436, getmaxx(), 436);

// Stone

rectangle(getmaxx() - i, 436, 650 - i, 431);

// Stop the screen for 10 secs

delay(10);

// Clear the screen

cleardevice();

}

getch();

// Close the graph

closegraph();

}

**OUTPUT:**



