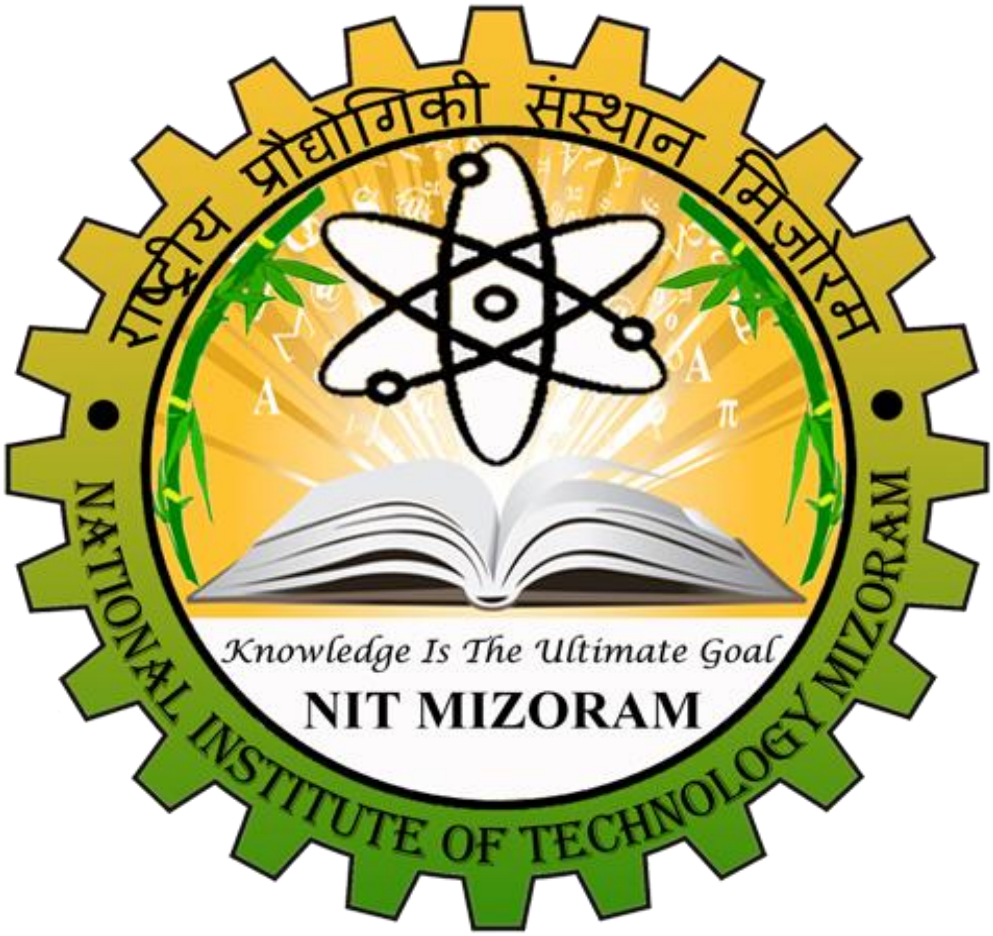
NATIONAL INSTITUTE OF TECHNOLOGY MIZORAM



COMPUTER GRAPHICS LAB ASSIGNMENT

Name: NIRAJ KUMAR

Department: CSE

Enrollment No. : BT19CS031

1. Write a C- Program which generates pixel activation list for drawing the following simple two dimensional objects.

-> House

[link to code on github]

```
// C program to draw a house using
// graphics.h library
#include <stdio.h>
#include <graphics.h>
#include<conio.h>
#include<iostream>
using namespace std;

// Driver Code
int main()
{
    // Initialize of gdriver with
    // DETECT macros
    int gdriver = DETECT, gmode;

    // Initialize structure of
    // the house
    initgraph(&gdriver, &gmode, (char*)"");

    // Create lines for structure
    // of the House
    line(100, 100, 150, 50);

    line(150, 50, 200, 100);
```

```
    line(150, 50, 350, 50);
    line(350, 50, 400, 100);

    // Draw rectangle to give proper
    // shape to the house
    rectangle(100, 100, 200, 200);
    rectangle(200, 100, 400, 200);
    rectangle(130, 130, 170, 200);
    rectangle(250, 120, 350, 180);

    // Set color using setfillstyle()
    // which take style and color as
    // an argument
    setfillstyle(7, 5);

    // Fill the shapes with colors white
    floodfill(131, 131, WHITE);
    floodfill(201, 101, WHITE);

    // Change the filling color
    setfillstyle(3, 6);

    // Fill the shapes with changed colors
    floodfill(101, 101, WHITE);
    floodfill(150, 52, WHITE);
    floodfill(163, 55, WHITE);
    floodfill(251, 121, WHITE);

    // Print text on the Screen
    outtextxy(180,230, (char*)"( : Welcome To My New
Home : )");

    getch();
```

```
    // Close the initialized gdriver
    closegraph();
    return 1;
}
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL                    g++.exe build active file

> Executing task: C/C++: g++.exe build active file <

Starting build...
C:/TDM-GCC-32/bin/g++.exe -fdiagnostics-color=always -g "D:\Desktop\c++\computer graphics\BT19CS031_lab-3_Q1.cpp" -o "D:\Desktop\c++\co
mputer graphics\BT19CS031_lab-3_Q1.exe" -lbgi -lgdi32 -lcomdlg32 -luuid -loleaut32 -lole32

Build finished successfully.

Terminal will be reused by tasks, press any key to close it.
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

Windows PowerShell
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PS D:\Desktop\c++\computer graphics> ./BT19CS031_lab-3_Q1.exe
PS D:\Desktop\c++\computer graphics>
```
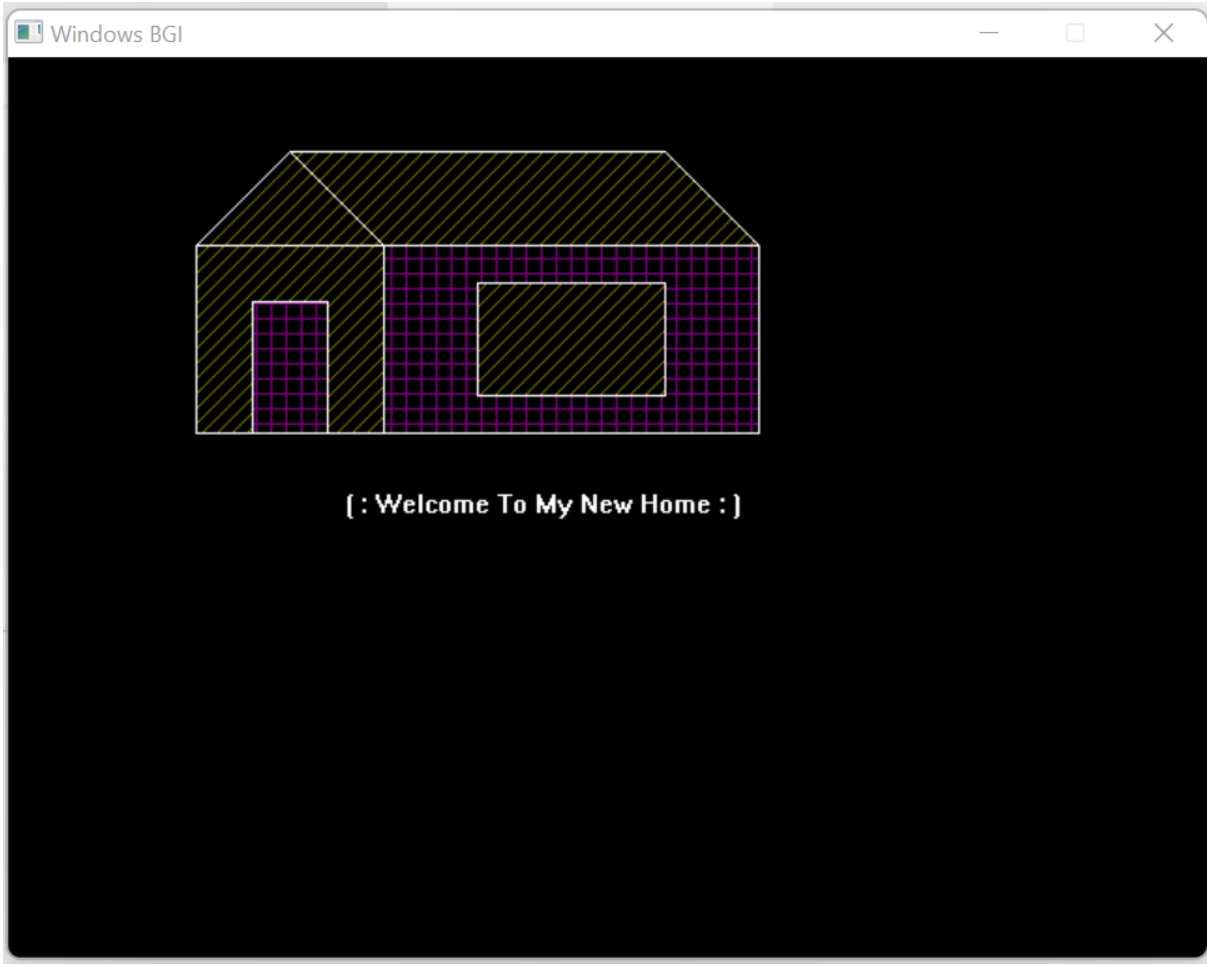


Windows BGI
[: Welcome To My New Home :]

2. Write a C- Program which generates pixel activation list for drawing the following simple two dimensional objects.

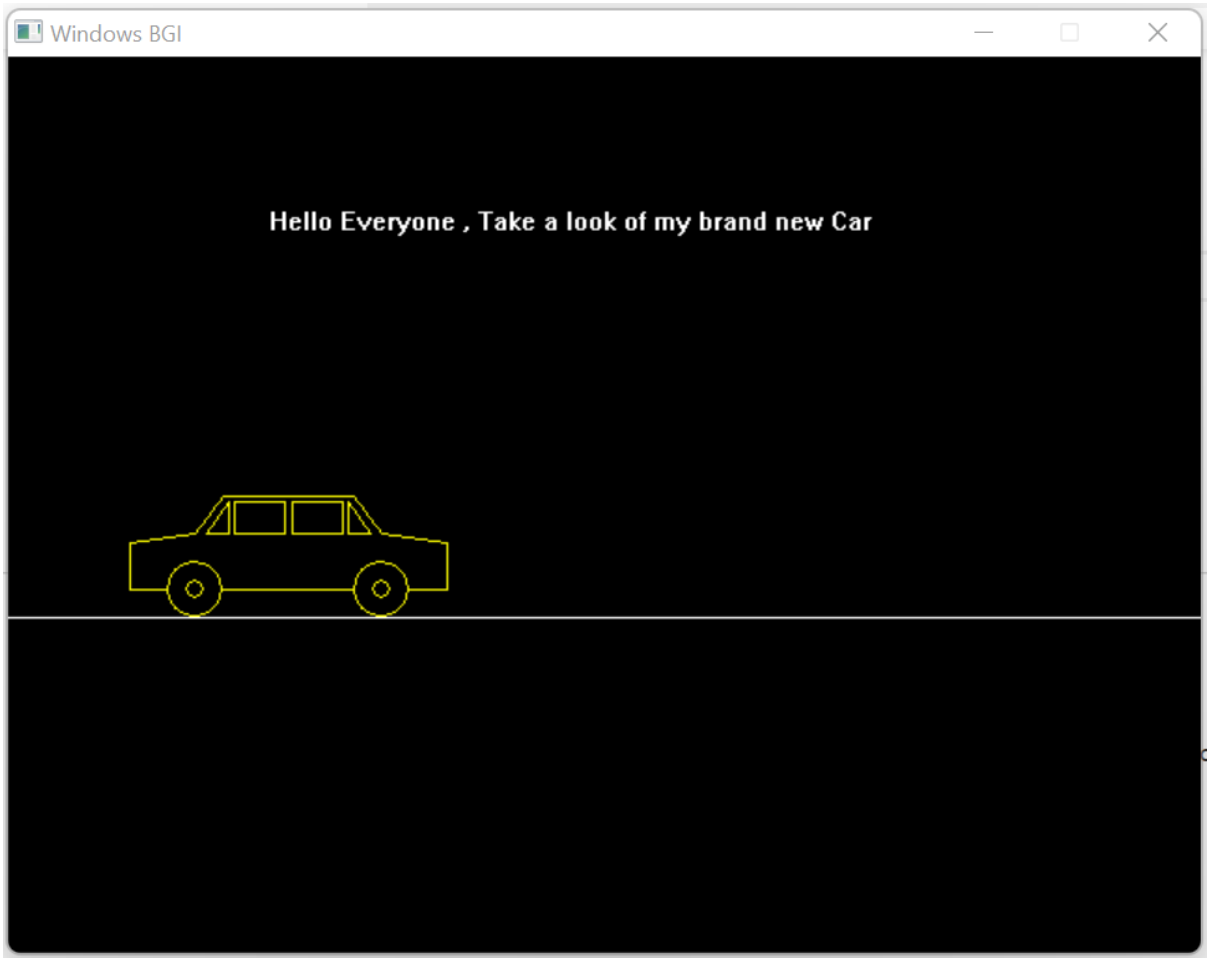
-> Car

[link to code on github]

```
// C program to draw a Car using
// graphics.h library
#include <stdio.h>
#include <graphics.h>
#include<conio.h>
#include<iostream>
using namespace std;

// Driver Code
int main()
{
    // Initialize of gdriver with
    // DETECT macros
    int gd = DETECT, gm;

    // Initialize structure of
    // the Car
    initgraph(&gd, &gm,NULL);

    // Create lines for structure
    // of the Car
```

```
line(0,300,640,300);
setcolor(14);

// Draw Circle to give proper
// shape to the Car Tyres

circle(100,285,15);
circle(200,285,15);
circle(100,285,5);
circle(200,285,5);

// Draw lines to give proper
// shape to the Car

line(65,285,85,285);
line(115,285,185,285);
line(215,285,235,285);
line(65,285,65,260);
line(235,285,235,260);

line(65,260,100,255);
line(235,260,200,255);

line(100,255,115,235);
line(200,255,185,235);

line(115,235,185,235);


line(106,255,118,238);
line(118,238,118,255);
line(106,255,118,255);

line(194,255,182,238);
```

```
    line(182,238,182,255);
    line(194,255,182,255);

    line(121,238,121,255);
    line(121,238,148,238);
    line(121,255,148,255);
    line(148,255,148,238);


    line(179,238,179,255);
    line(179,238,152,238);
    line(179,255,152,255);
    line(152,255,152,238);

    //Set the colour of the car body
    setcolor(15);

    // Print text on the Screen
    outtextxy(140,80, (char*)"Hello Everyone , Take a
look of my brand new Car");

    getch();

    // Close the initialized gdriver
    closegraph();
    return 1;
}
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL                g++.exe build active file

> Executing task: C/C++: g++.exe build active file <

Starting build...
C:/TDM-GCC-32/bin/g++.exe -fdiagnostics-color=always -g "D:\Desktop\c++\computer graphics\BT19CS031_lab-3_Q2.cpp" -o "D:\Desktop\c++\co
mputer graphics\BT19CS031_lab-3_Q2.exe" -lbgi -lgdi32 -lcomdlg32 -luuid -loleaut32 -lole32

Build finished successfully.

Terminal will be reused by tasks, press any key to close it.
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

Windows PowerShell
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PS D:\Desktop\c++\computer graphics> ./BT19CS031_lab-3_Q2.exe
PS D:\Desktop\c++\computer graphics>
```