Title : Installation and Execution of Computer Graphics Program on Code::Blocks.

1. Introduction:

This report provides a step-by-step guide on installing computer graphics files on Code::Blocks and running a simple program to display four circles on the screen. The sessional focuses on the practical aspects of setting up the development environment for computer graphics using Code::Blocks.

2. Objective:

- Installing Graphics Files on Code::Blocks
- Executing simple program for basic graphics rendering.

3. Methodology:

3.1 Installation of Computer Graphics Files:

To begin, it's essential to have Code::Blocks installed on my system. Once Code::Blocks is installed, follow these steps to set up computer graphics:

a. Open Code::Blocks and create a new project.

b. Under "File," select "New," then "Project..." and choose "Empty Project."

c. Set the project title(e.g. 194071_lab1) and choose a location to save the project.

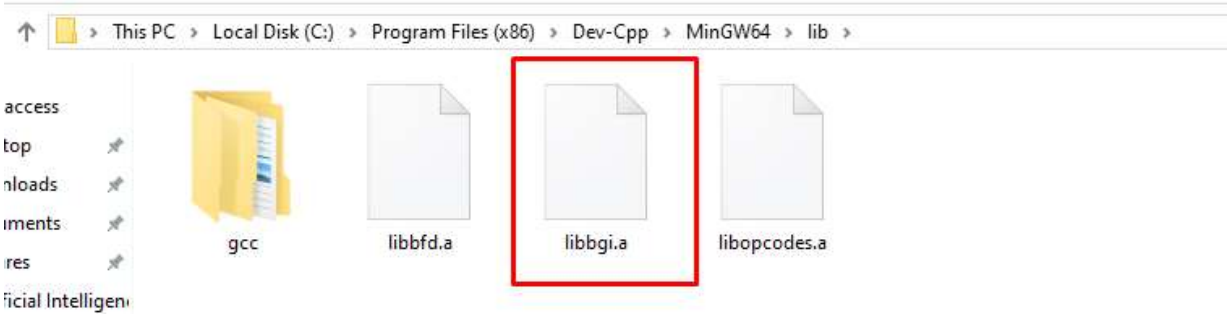
d. In the "Compiler" settings, select a compiler that supports graphics programming. For example, GCC or MinGW.

e. Click "Finish" to create the project.

f. Now, download the necessary graphics.h and winbgim.h files from a reliable source.

g. Place the downloaded header files in the "include" folder of the compiler directory.

h. Additionally, download the libbgi.a file and place it in the "lib" folder of the compiler directory.



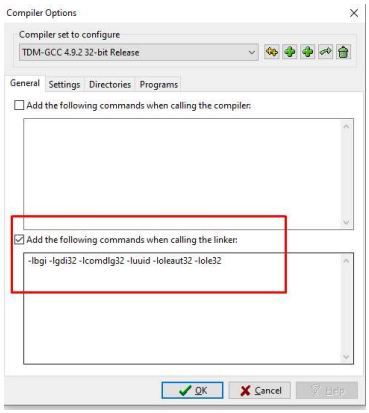
3.2 Configuring Code::Blocks:

To configure Code::Blocks to use the graphics libraries:

a. Open the project settings by right-clicking on the project in the workspace and selecting "Build Options."

b. Under the "Linker Settings" tab, add the path to the libbgi.a file in the "Link Libraries" section.

c. Click "OK" to save the changes.



4. Implementation:

4.1 Writing and Running the Simple Program:

Now, let's create a simple program to display four circles on the screen:

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

int main() {
   initwindow(400,300,"First Sample");
   int x = getmaxx();
   int y = getmaxy();
   int X = x/2;
   int Y = y/2;

   rectangle(0,0,x,y);
   line(X, 0,X, y);
   line(0, Y, x, Y);
   circle(X+85,Y+85,50);
    circle(X+85,Y-85,50);
     circle(X-85,Y-85,50);
      circle(X-85,Y+85,50);
    while(!kbhit())
    {

        delay(200);
    }
    return 0;
}
```

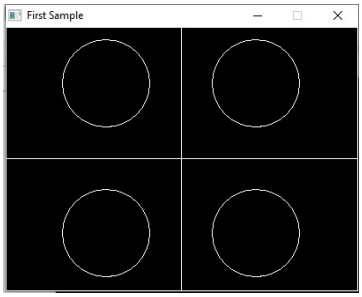
5. Compilation and Execution:

a. Save the program with a .cpp extension (e.g., LAB1CG.cpp).

b. Click on the "Build and Run" button in Code::Blocks to compile and execute the program.

c. The output window should display a graphical window with four circles.

5.1 Output:



6. Conclusion: This sessional provides a hands-on experience in installing computer graphics files on Code::Blocks and running a simple program to display graphical output. Understanding this process is fundamental for students exploring computer graphics in a practical setting.