Sonargaon University(SU)

Department of Computer Science and Engineering
B.Sc. Engineering in Computer Science and Engineering

Installation and Execution of Computer Graphics Program on Dev-C++

Course title: Computer Graphics

Course code: CSE414

Section: 26B

Session: Summer

Submitted by	Submitted to
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Date: 05-16-25

Introduction :

This report provides a step-by-step guide to setting up a computer graphics environment using Dev-C++. It includes detailed instructions on installing the necessary graphics files and running a basic program that displays four circles on the screen. The session emphasizes the practical aspects of configuring Dev-C++ for computer graphics programming, making it easier for students to get started with visual output in C++.

Objective:

The main objective of this session is to:

- Set up the Dev-C++ IDE for computer graphics programming in C++.
- Install and configure the graphics header files(graphics.h & winbgim.h) and library file (libbgi.a) required to run graphics-based programs.
- Compile and run a simple C++ program that draws four circles using functions from the graphics library.
- Gain practical experience with graphical output and understand the initialization process for graphical applications.

Steps to Set Up Dev-C++ for Computer Graphics:

Install Dev-C++:

- Download the Dev-C++ setup file from a trusted source (e.g. Bloodshed or Orwell Dev-C++).Link : https://sourceforge.net/projects/orwelldevcpp
- Complete the installation by following the on-screen instructions.

Download Graphics Files:

- Download the required graphics.h, winbgim.h, libbgi.a files from (https://drive.google.com/file/d/16xZBvFXf7yFjxwTpuyevK1KPuLgUeZFh/view)
- These files are necessary for using graphics functions in C++.

Place the Files in the Correct Folders:

- Copy graphics.h and winbgim.h into:
- C:\Program Files (x86)\Dev-Cpp\MinGW64\include
- Copy libbgi.a into:
- C:\Program Files (x86)\Dev-Cpp\MinGW64\lib

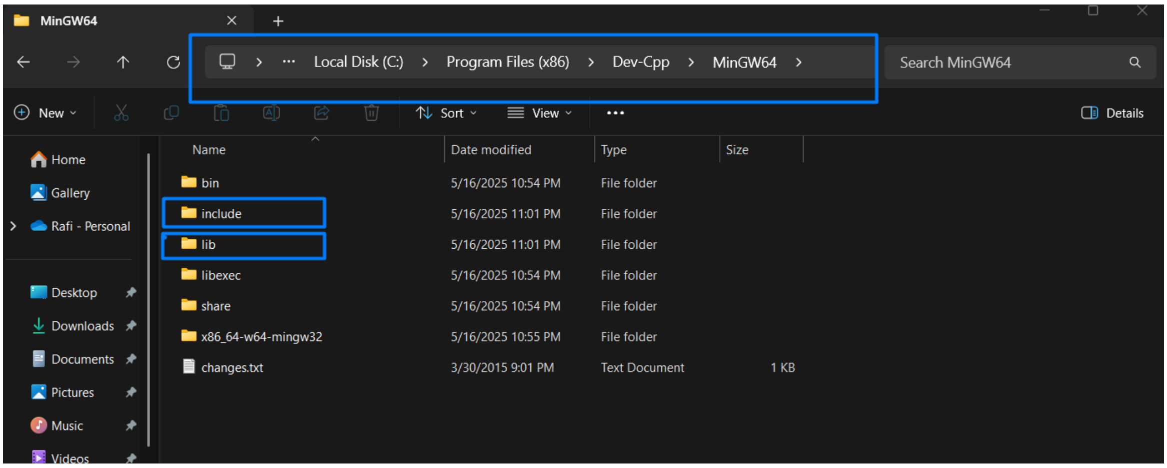
Configure the Linker in Dev-C++:

- Open Dev-C++.
- Go to Tools > Compiler Options.
- Compiler set to configure : TDM-GCC 4.9.2 32-bit Release
- Under the "Linker" tab or the "Linker Commands", add the following:
- `-lbgi -lgdi32 -lcomdlg32 -luuid -loleaut32 -lole32`

Compile and Run the Program:

- Save the file with .cpp extension.
- Compile and run to verify that the output window displays four circles.

Place the Files in the Correct Folders:



Name	Date modified	Type	Size
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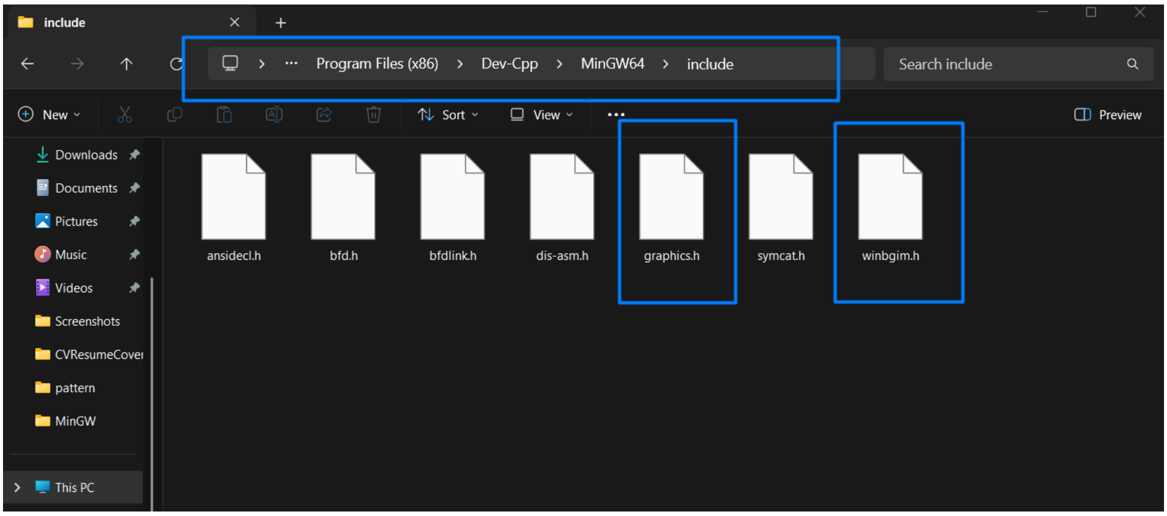
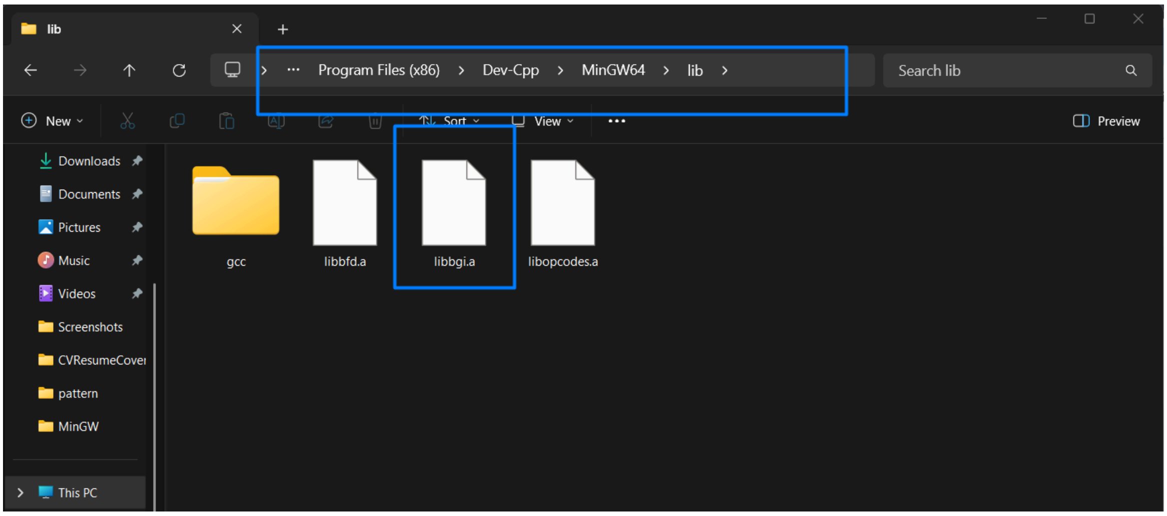
include	5/16/2025 11:01 PM	File folder	
lib	5/16/2025 11:01 PM	File folder	
libexec	5/16/2025 10:54 PM	File folder	
share	5/16/2025 10:54 PM	File folder	
x86_64-w64-mingw32	5/16/2025 10:55 PM	File folder	
changes.txt	3/30/2015 9:01 PM	Text Document	1 KB

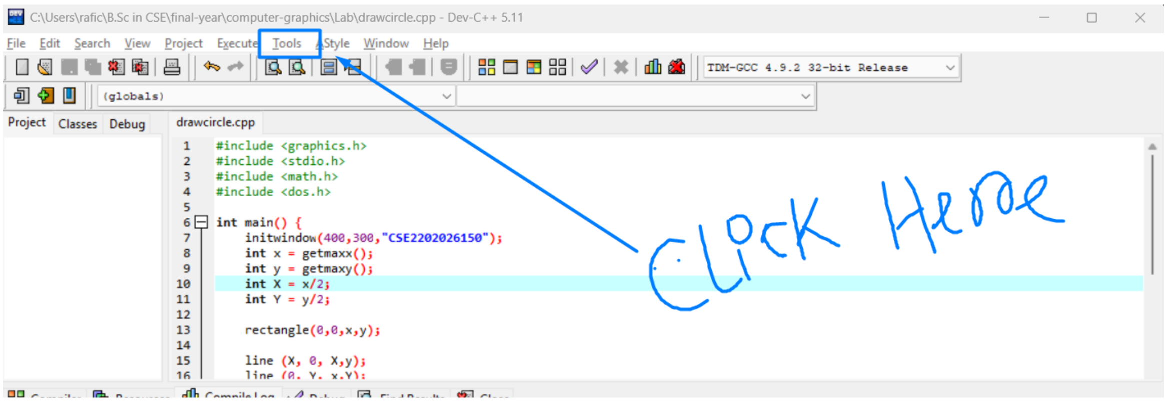
include used for header files (graphics.h & winbgim.h) nad lib used for library files(libbgi.a)

For header and library :



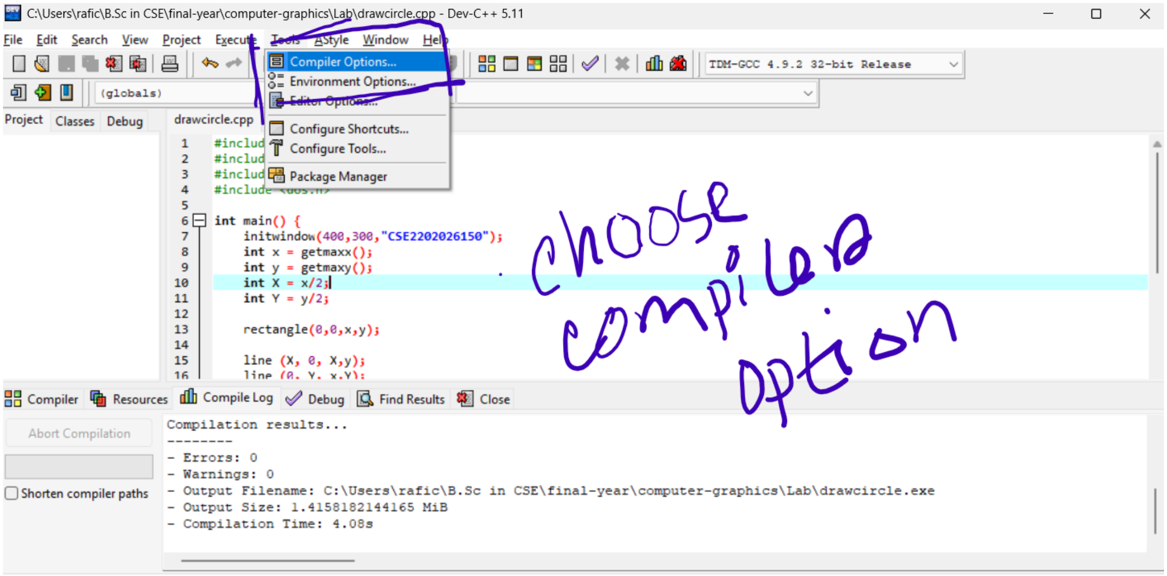


Configure the Linker in Dev-C++:

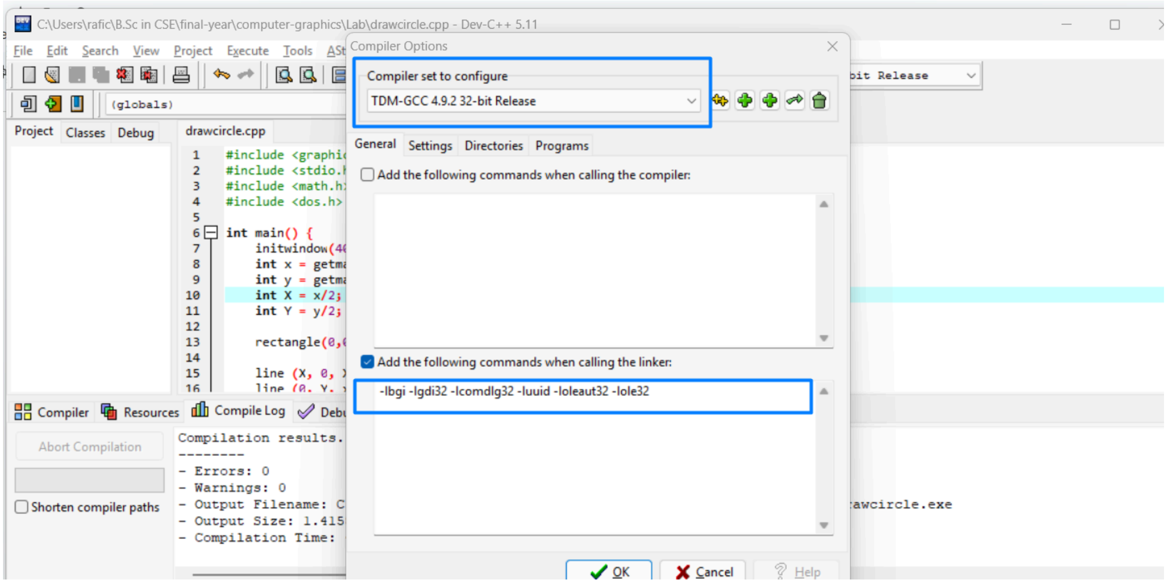

C:\Users\rafic\B.Sc in CSE\final-year\computer-graphics\Lab\drawcircle.cpp - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 32-bit Release
(globals)
Project Classes Debug
drawcircle.cpp
Click Here

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

int main() {
    initwindow(400,300,"CSE2202026150");
    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);
```

Then choose the compiler option :


C:\Users\rafic\B.Sc in CSE\final-year\computer-graphics\Lab\drawcircle.cpp - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
Compiler Options...
Environment Options...
Editor Options...
Configure Shortcuts...
Configure Tools...
Package Manager
TDM-GCC 4.9.2 32-bit Release
(globals)
Project Classes Debug
drawcircle.cpp
Compiler Resources Compile Log Debug Find Results Close
Abort Compilation
□ Shorten compiler paths
choose compiler option

```
Compilation results...
--------
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\rafic\B.Sc in CSE\final-year\computer-graphics\Lab\drawcircle.exe
- Output Size: 1.4158182144165 MiB
- Compilation Time: 4.08s
```


C:\Users\rafic\B.Sc in CSE\final-year\computer-graphics\Lab\drawcircle.cpp - Dev-C++ 5.11
File Edit Search View Project Execute Tools ASt
Compiler Options
General Settings Directories Programs
OK Cancel Help

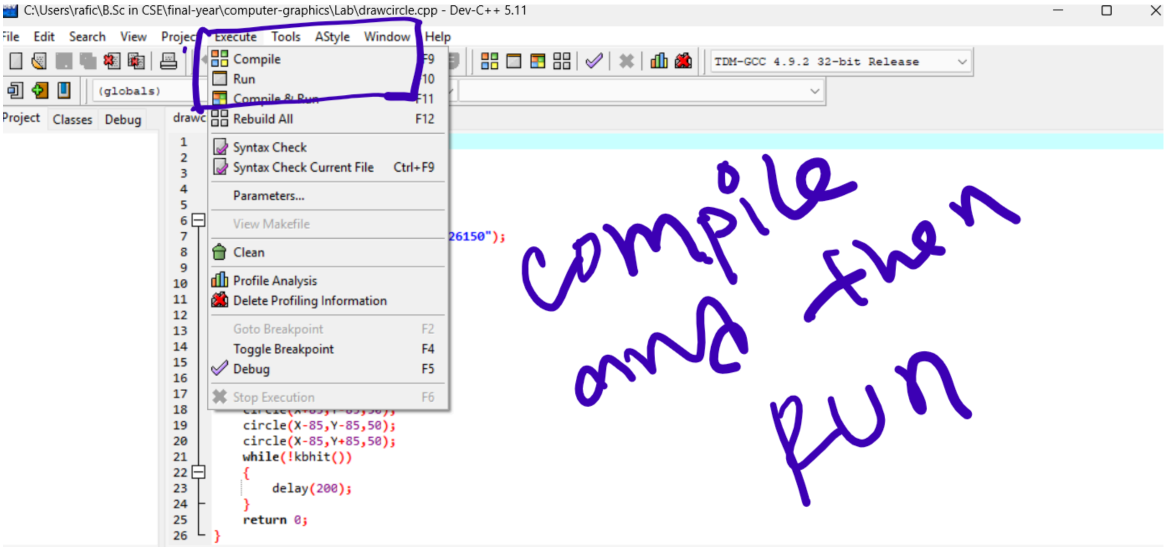
Compiler set to configure: TDM-GCC 4.9.2 32-bit Release

□ Add the following commands when calling the compiler:

☑ Add the following commands when calling the linker:

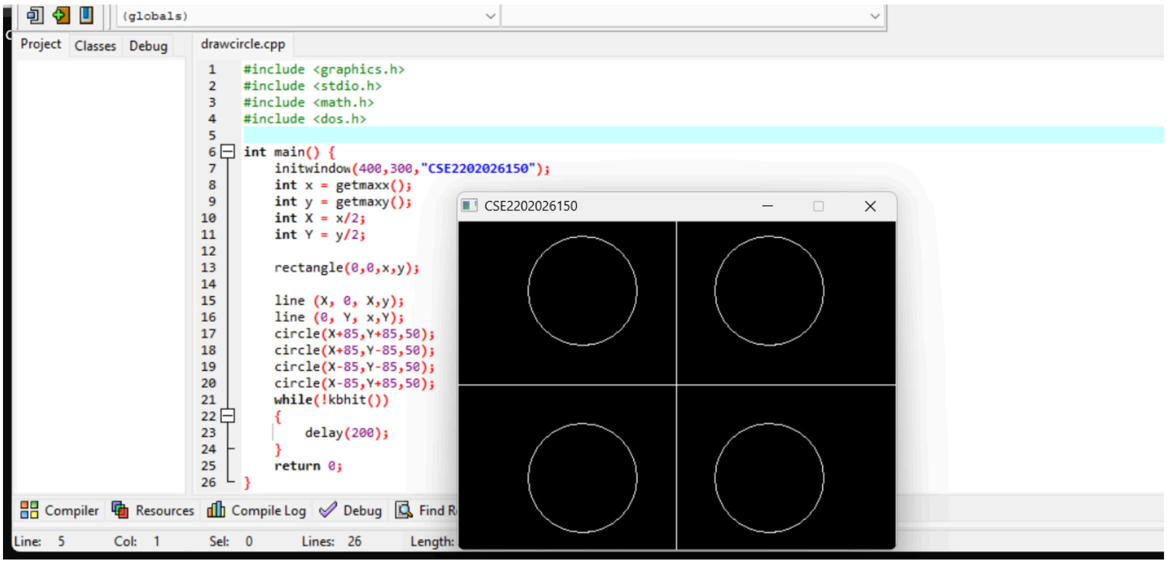
```
-lbgi -lgdi32 -lcomdlg32 -luuid -loleaut32 -lole32
```

Compile and Run the Program:



```
26150");
    circle(X-85,Y-85,50);
    circle(X-85,Y+85,50);
    while(!kbhit())
    {
        delay(200);
    }
    return 0;
}
```

Result :



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

int main() {
    initwindow(400,300,"CSE2202026150");
    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;
}
```

Code :

```
#include <graphics.h>
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int main() {
	initwindow(400,300,"CSE2202026150");
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	int X = x/2;
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	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;
}
```