<u>Practical-1</u>

1. What is IDE? Give its examples and advantages.

An integrated development environment (IDE) is software for building applications that combines common developer tools into a single GUI.

Examples are as follows :

Visual studio, Eclipse, Pycharm, Intellij, Bluej, Netbeans, Wenstorm etc.

Advantages are as follows :-

IDE's can be used to create software applications, drivers and utilities.

It allows developing software in any programming language without spending much time on language syntax.

IDE has the ability to correct syntaxes, gives a warning about memory leaks, assist in writing quality of code, etc.

2. What is GUI?

The graphical user interface, developed in the late 1970s by the Xerox Palo Alto research laboratory and deployed commercially in Apple's Macintosh and Microsoft's Windows operating systems, was designed as a response to the problem of inefficient usability in early, text-based command-line interfaces for the average user.

Graphical user interfaces would become the standard of user-centered design in software application programming, providing users the capability to intuitively operate computers and other electronic devices through the direct manipulation of graphical icons such as buttons, scroll bars, windows, tabs, menus, cursors, and the mouse pointing device. Many modern graphical user interfaces feature touchscreen and voice-command interaction capabilities.

3. What types of applications can we develop using Visual Studio?

Microsoft Visual Studio is an IDE made by Microsoft and used for different types of software development such as computer programs, websites, web apps, web services, and mobile apps.

4. Which languages are supported by visual studio ?

Visual Studio offers powerful HTML, CSS, JavaScript, and JSON editors. Tap into the power of LESS, and Sass, use PHP, Python, or C# with ASP.NET. All the popular languages are supported and you can move between languages and project types with ease.

5. List down the versions of .NET Framework and Visual studio?

.NET Versions : 4.7, 4.6.2, 4.6.1, 4.6

Visual Studio Versions : version 8, version 9, version 10, version 12, version 14, version 15, version 16, version 17.

6. List out the features of Visual studio ?

Code editor, debugger, designer, properties editor, open tab browser etc.

7. Compare Visual Studio IDE with other IDES ?

It is the best IDE out there because it comes with fully packed sweet array of tools and features to elevate and enhance every stage of software development. Visual Studio Code combines the best of web, native, and language-specific technologies. Using Electron, VS Code combines web

technologies such as JavaScript and Node. js with the speed and flexibility of native apps.

8. Write advantages of C# Language over other languages ?

C# is directly related to C and C++. This is not just an idea, this is real. As you recall C is a root for C++ and C++ is a superset of C. C and C++ shares several syntax, library and functionality. In addition structures, unions, arrays, strings and pointers are most important and similar functionality for both languages. C# inherits most of its operators, keywords, and statements directly from C++. Enums are clearly a meaningful concept in C++. Finally I can clearly say that C# is the first component-oriented language in the C/C++ family. C# constructors are very similar with C++ constructors. Like C++, methods are non-virtual by default, but can be marked as virtual.   There is also some difference between C# and C++, C# supports multiple inheritance of interfaces, but not of classes. Another difference is destructors, their syntax is same with C++ but actually they are very different.