ASSIGNMENT 01

1. Computers Understand Only **Binary Language** because it is a **Machine Language** which has **0 and 1** which means it records the data in the form 0 and 1 in the form of **Electric Signals**.

2. **IDE** Stands for **Integrated Development Environment**. It is a Software Application that provides required facilities for Computer Programmers to develop any Software.

3. **Text Editor** simply allows us to **type and edit text** in one colour while **Code Editor** is also a Text Editor which provide us some advanced facilities to **build, debug, compile** and **run** the code in different colours to represent **variables and keywords**.

4. There are two basic steps to develop a Software using C Language:

    - **Create a Source File: -**
      The source file is a text file on disk which contains instructions for the computer that gets compiled.

    - **Build Software: -**
      In this process, we need to convert source files into executable program which is done in two steps:

        - Compiling – The Compiler converts source code (.c file) into object file (.o file)

- Linking – The Linker takes these object files together with library files and creates an executable program (.exe file)

5. a. **C17** is the latest version of C Language, prepared in **2017** but published in **July 2018**, (so, also commonly referred as **C18**), which replaced **C11**.

b. C Language was developed by **Dennis Ritchie** in **1972** at **AT&T (American Telephone & Telegraph) Bell Laboratory** for the development of **UNIX Operating System**.

c. **System Software** acts as the interface between the computer hardware and the application software. It is a set of programs that control and manage the resources and operations of computer hardware.

Application Software is a program that performs a specific task for the end-user. It runs on the platform provided by system software. It acts as a platform between the system software and the end-user.

d. Decimal Number System is converted into Binary Number System by the following Steps:

- **Step 1:** Divide the given decimal number by 2 and note down the remainder.
- **Step 2**: Now, divide the obtained quotient by 2, and note the remainder again.
- **Step 3:** Repeat the above steps until we get 0 as the quotient.
- **Step 4:** Now, write the remainders in such a way that the last remainder is written first, followed by the rest in the reverse order.

For Example:

Convert $(47)_{10}$ into Binary Number System