Name: Ijaz Ullah

Assignment# 01

C language

Q1: Why do computers understand only binary language?

ANS: Computers understand binary language because their electronic components such as transistors, operate using two states i.e. off and on which are represented by 0s and 1s in binary. This binary system simplifies the design and operation of computer hardware, allowing for precise and efficient processing of information. While higher-level programming languages make it easier for humans to write code, computers ultimately translate that code into binary instructions to perform tasks.

Q2: What is the full form of IDE?

ANS: The full form of IDE is an integrated development environment.

Q3: What is the difference between a text editor and a code editor?

ANS: A text editor is a basic tool for editing plain text files, while a code editor is a specialized tool designed specifically for writing and editing code.

Q4: What are the steps to develop software using the C language?

ANS: Steps to develop software using C language.

1. **Requirements and functionalities needed for the software**
2. **Design the solution**
3. **Write the code using C language**
4. **Compile the code**
5. **Debug and test**
6. **Optimization of the software if needed**
7. **Documentation**
8. **Maintain and update**

Q5: Explore on your own  
a. What is the latest version of C Language?

ANS: C18  
b. Who developed C Language?

ANS: Dennis Ritchie  
c. What is the difference between System and Application Software?

ANS: System software manages and controls the computer hardware while application software performs specific tasks for end users.  
d. How to convert a number from a decimal number system to a binary number  
system?

ANS:

1. Start with the decimal number that you want to convert
2. Divide the decimal number by 2 and note down the remainder ( either 0 or 1 )
3. Divide the quotient obtained in step 2 by 2 again and note down the remainder
4. Repeat step 3 dividing the quotient by 2 until the quotient becomes 0
5. Write down the remainder obtained in reverse order. This will give you the binary representation of the decimal number