5 Lecture - CS501

Important Subjective

1. **What is SRC?**
   SRC stands for Simple RISC Computer, which is a computer architecture following the RISC approach.

   What is the size of an SRC instruction word?
   An SRC instruction word has a fixed size of 32 bits.

   What is the purpose of the ALU in SRC?
   The ALU (Arithmetic Logic Unit) in SRC is responsible for performing arithmetic and logic operations on the operands.

   What is the role of the control unit in SRC?
   The control unit generates control signals for various components to ensure proper instruction execution.

   What does the memory interface do in SRC?
   The memory interface handles communication between the processor and memory.

   What is RTL?
   RTL (Register-Transfer Level) is a hardware design language used to describe digital circuits at the register transfer level.

   What is the goal of SRC architecture design?
   The goal of SRC architecture design is to have a streamlined and simple instruction set.

   How are instructions encoded in SRC?
   Instructions are encoded using a fixed-format with a 32-bit word size.

   What types of instructions are included in the SRC instruction set?
   The SRC instruction set includes basic operations such as arithmetic and logic operations, as well as data transfer and control flow instructions.

   What is required to implement SRC in RTL?
   To implement SRC in RTL, one needs to have an understanding of the SRC architecture and the ability to design and implement the hardware components using RTL.