USART

1.Initialize the USART-
    i. Decide on the baud rate and set it via UBRRH and UBRRL registers.
    ii. Set the number of stop bits, character size and enable Tx and/or Rx via UCSRB and UCSRC registers.
2. Create a data packet, with the correct number of data bits and start/stop bits.
3. Transmit/receive the data packet-
    i. TRANSMISSION:
        a. Check if UDR is empty or not.
        b. If empty write the packet onto UDR, if you have a 9th bit write it onto TXB8 bit in UCSRB.
        c. Data will be transmitted, wait for some time, setup the new packet of you need consecutive transmissions.
    ii. RECEPTION:
        a. Check if reception is complete or not.
        b. If data is received then collect it from UDR and RXB8 (in case of 9 bit data) bit of UCSRB.
        c. Return this data.

*Please refer to the USART ppt uploaded on the courses portal for reference. The slide includes pseudo-codes for USART initialization, transmission and reception.