Choose one of the following points and submit a report about it:

1. Water supply system design, give detailed discussions for the following items
    a. Flow pressure
    b. Inadequate pressure
    c. Demand types
    d. Estimating demand
    e. Design loads
    f. Water supply fixture units
    g. Friction head loss
    h. The maximum velocity
    i. Prepare water supply pipes sizing table using the recommended velocity and pressure drop for ppr pipes and pvc pipes
2. Hot water system design, give detailed discussions for the following items
    a. Prepare water supply pipes sizing table using the recommended velocity and pressure drop for ppr pipes and pvc pipes
    b. Objectives of hot water system design
    c. Safety devices in the hot water system
    d. Water heater types
        i. Description and schematic diagram of each type
        ii. Advantages and disadvantages of each type
        iii. Applicability of each type
        iv. Sizing basics
        v. Sizing sample for each type
3. Drainage systems fundamentals give detailed discussions for the following items
    a. Prepare water supply pipes sizing table using the recommended velocity and pressure drop for ppr pipes and pvc pipes

b. Fundamentals and governing laws for flow in horizontal drainage piping
c. Fundamentals of flow in soil and waste stacks
d. Detailed description of the different drainage systems
e. The importance and basic of design of the clean outs