For safe train movement and train control railway signaling is used. Bangladesh Railway uses several type of signaling system. The more important signaling system are:

1. Mechanical Interlocking.
2. Electro Mechanical Interlocking.
3. Panel Interlocking (Relay)
4. Computer Based Interlocking

The most acceptable and modernize signaling system is CBI system.

Computer Based Interlocking

Computer-based Interlocking uses Electro-mechanical relays requiring complex wiring and Interconnections. Computer Based Interlocking (CBI) provides safety signaling and control systems for safe operation of train services with higher availability, reliability, and safety. BR adopted CBI technology for signaling modernization since 2000 and adopted globally accepted standard specification for CBI.

The safety features of interlocking system are designed in a way that can avoid all situations which is dangerous for train operation. The system is based on hot stand by.

Very important part of CBI is software. Bangladesh Railway use SIL 4 software which is purchased from foreign country. If railway software is developed in our country large amount of currency will be saved.

To design Railway signaling software, we need to know the signaling system. For understanding Railway signaling, one must have to know following points.

1. Working rule Diagram (WRD)
2. Absolute Block System
3. Different type of signals (Home Signal, outer Signal. Starter Signal, Advanced Starter Signal,Calling on Signal, Shunt Signal, Repeating Signal, Co-acting Signal  etc)
4. Classification of Tracks, stations,
5. Point machine function
6. Principles interlocking systems (Relation among signal, track, level crossing and others safety device.)

Interlocking is a mechanism that coordinates signals, switches, and other equipment to prevent conflicting movements and ensure safe distances between trains.

1. Interlocking table.
2. Isolation of running lines and sidings line
3. Basic Principles of centralized train and traffic control operation.