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## Module 2:

### Multiplication algorithms

- Booth's
- Modified Booth's

### Division algorithms

- Restoring
- Non-Restoring

### Floating point representation with IEEE standards

- Single precision
- Double precision
- Addition, Subtraction
- Multiplication { algorithms }  
for floating point nos.

# Representation of Character codes

- ASCII
- EBCDIC
- UNICODE

## Module 3

### Memory System hierarchy

- Locality of Reference

### Main memory organization

- Memory Technologies
- Types of main memory
- Memory Design
- Memory Interleaving
- Performance

## Cache memory

- Locality of Reference
- Concepts
- address mapping functions
- Replacement algorithms
- Multi level caches
- split cache and Unified cache
- cache memory performance

## Virtual Memory Systems

- Virtual memory Organization
- Address Translation
- TLB
- TLB performance with System

- Page replacement algorithms

## Error detection & correction

- Need
- Memory Reliability
- Error detection code & correction (Hamming code)
- Single bit / Multiple bit