Just-In-Time
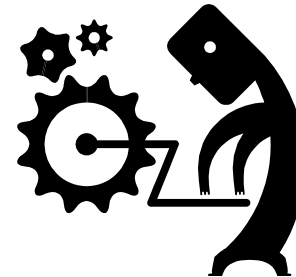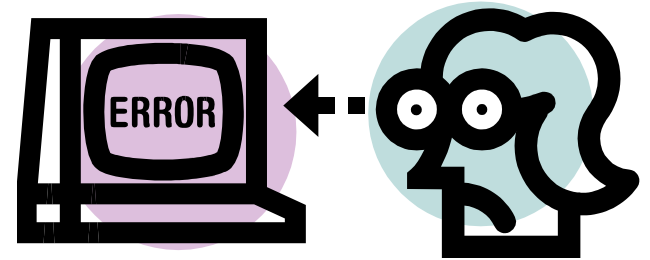
Essentially JIT means the elimination of waste --

in whatever form it might take
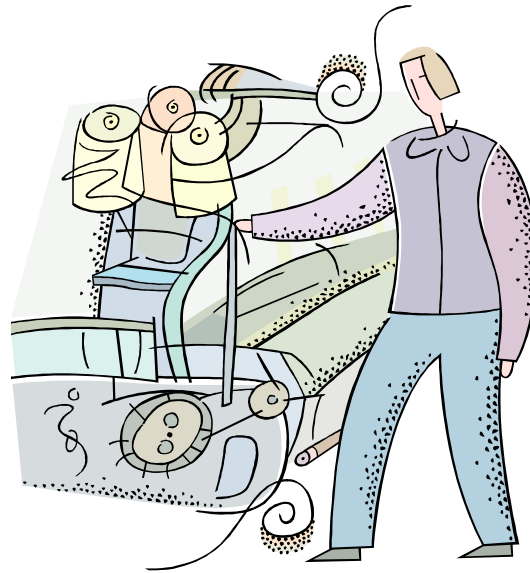
1. **time**

2. **energy**

3. **materials**

4. **supplies**

5. **errors**

6. **inventory**

**--- the Japanese certainly view inventory as waste**

JIT Concepts

- **Stockless Production**
- **Pull Production Systems**
- **Kan Ban**

Additional JIT Concepts

- **1. Elimination of discrete batches or Significant Reduction in Batch Size**

- **2. Reduction of All Inventories**

- **3. Production Schedules that Level the Capacity Loads**

- **4. Visual Control Systems**

- **5. Direct Ties With Vendors**

- **6. Reduction (if possible Elimination)**
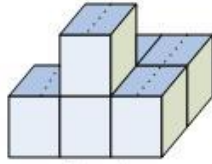
- **of Setup Time**

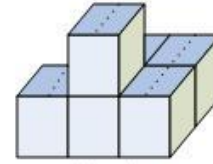- **7. Focus on Continuous Improvement**
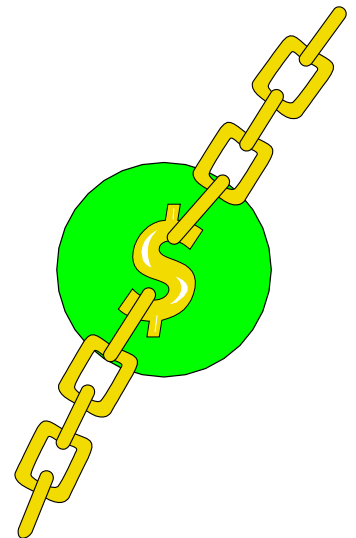
Production
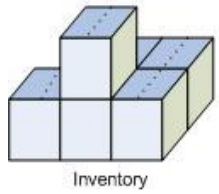
Transient Sub-Assembly

- Also called a Phantom

BOM

```
                           ┌──────────────┐
                           │ Refrigerator │
                           └──────┬───────┘
        ┌──────────────┬──────────┴──────────┬──────────────┐
 ┌──────┴───────┐ ┌────┴─────┐        ┌──────┴─────┐  ┌──────┴─────┐
 │   Faucet     │ │Part # 10 │        │ Part # 11  │  │ Part #12   │
 │ Sub-Assembly │ │          │        │            │  │            │
 └──────┬───────┘ └──────────┘        └────────────┘  └────────────┘
 ┌──────┴───────┬─────────────┐
┌┴────────┐ ┌───┴────┐ ┌──────┴─────┐
│ Brackett│ │ Faucet │ │   Tubing   │
└─────────┘ └────────┘ └────────────┘
```
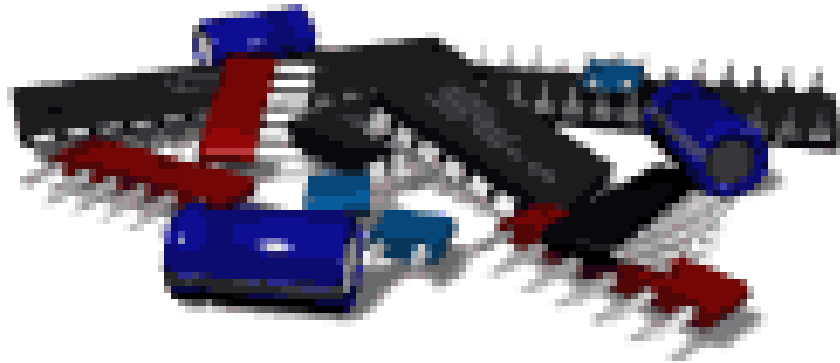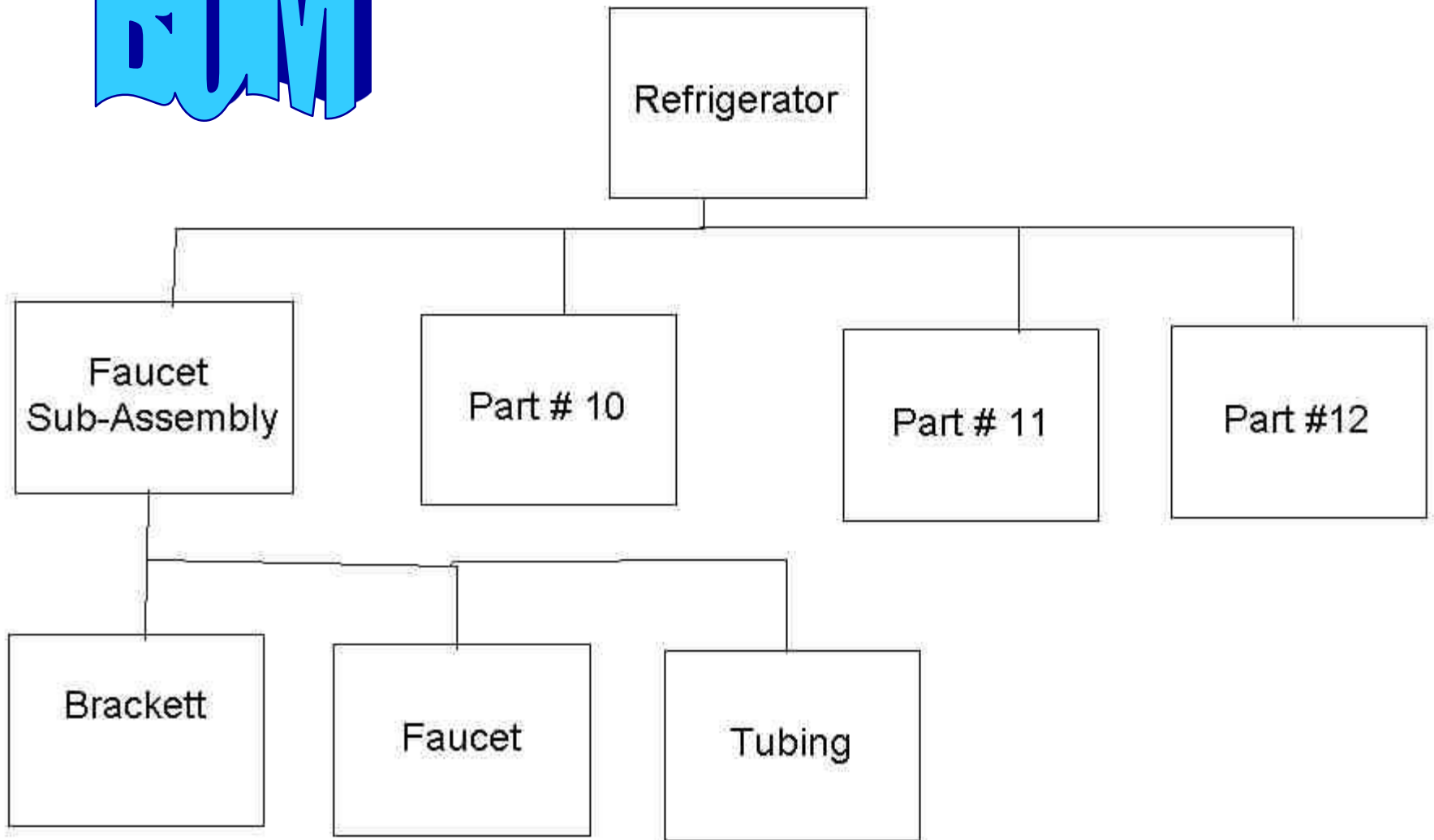
BOM (with phantom)
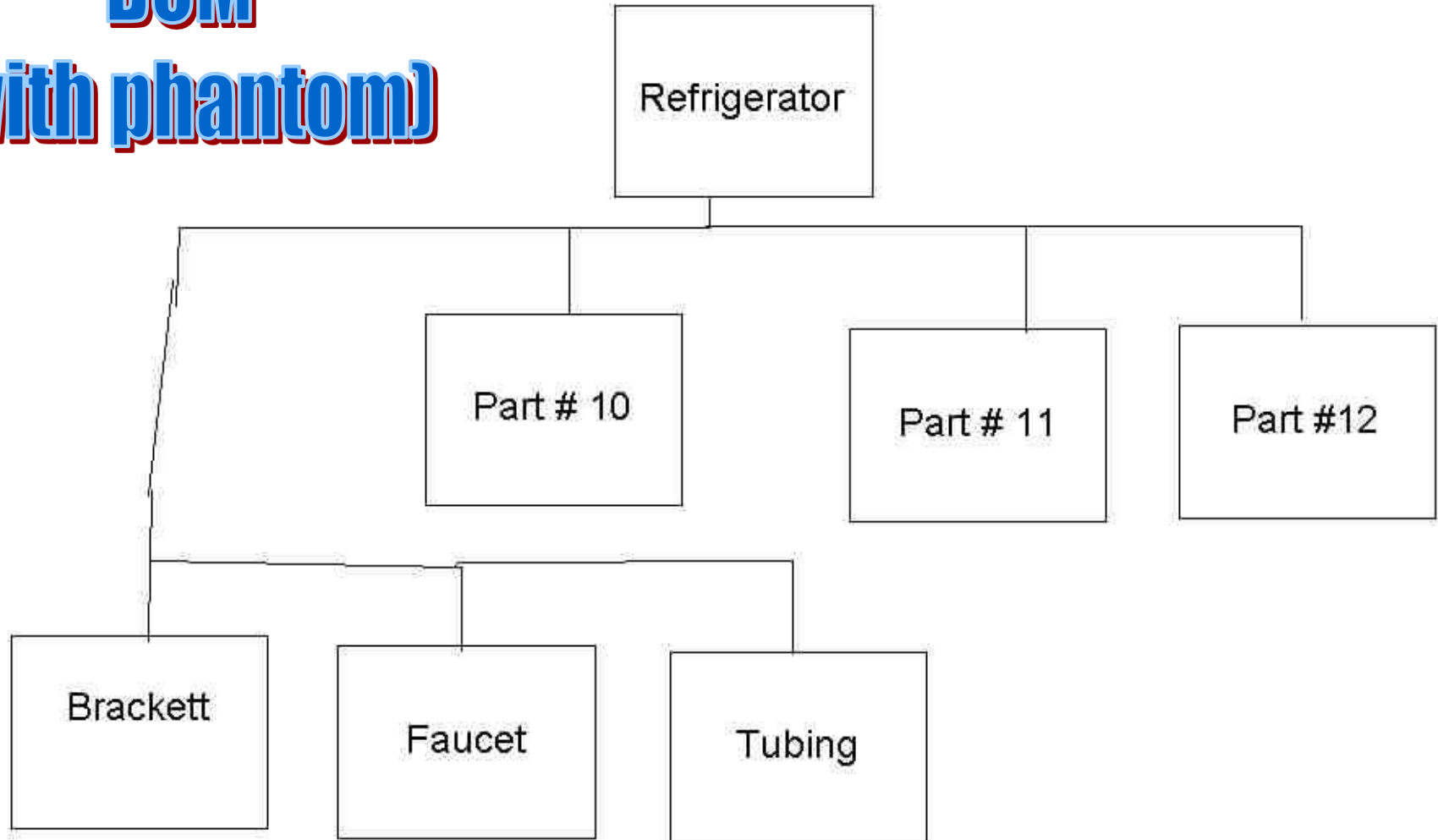
Hewlett-Packard

- Scheduling in a JIT Environment