## Map Pattern

**CIS 510** 

Department of Computer and Information Science University of Oregon



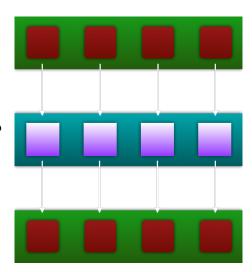
# **Developer Training**



Map Pattern Executive PIN Recovery

### Map Pattern

- N atomic data units
- 1-to-1 mapping of work units to compute units
- Compute units all apply the same atomic computation



### **Executive PIN Recovery**

O-SNAP security policies demand workers use an 8 digit pin, changed daily, to access secured resources.

Executive management has requested a pin recovery tool since they tend to forget the pins. To be compliant with the organizational security policies, no system or person may keep pins in plain text or reversibly encrypted. md5 checksums of the pin have no confidentiality requirements according to O-SNAP security policy.

| 1               | <b>2</b><br>ABC | 3<br>DEF  |
|-----------------|-----------------|-----------|
| <b>4</b><br>GHI | <b>5</b><br>JKL | 6<br>mno  |
| 7<br>PQRS       | <b>8</b>        | 9<br>wxyz |
|                 | 0               | ×         |

#### **Basic Solution**

- Have the user carry a hashed copy of the pin
- Enter the hashed copy to the software
- Software hashes all pins
- Software returns the pin that matches the entered hash
- http://ix.cs.uoregon.edu/~dellswor/410