Unplugged Activity to Teach PDC Concepts

Center for Parallel and Distributed Computing Curriculum Development and Educational Resources (CDER)

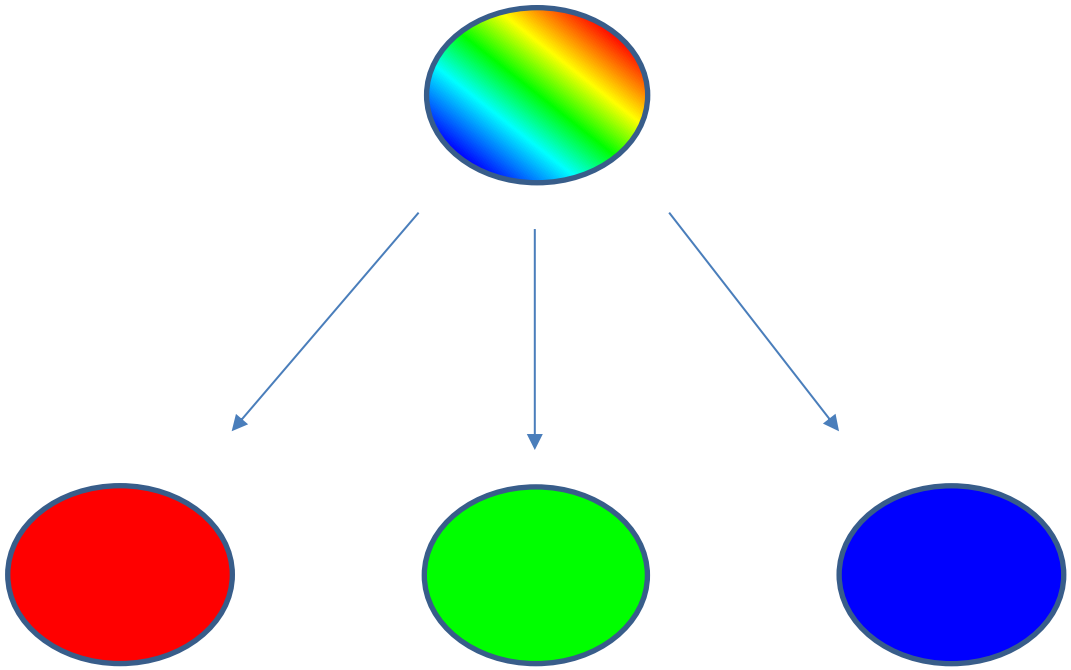
Unplugged

- Convey concepts easily
- Increase interest
- Engage students
- Enhance understanding
- Complementary for plugged

Plugged

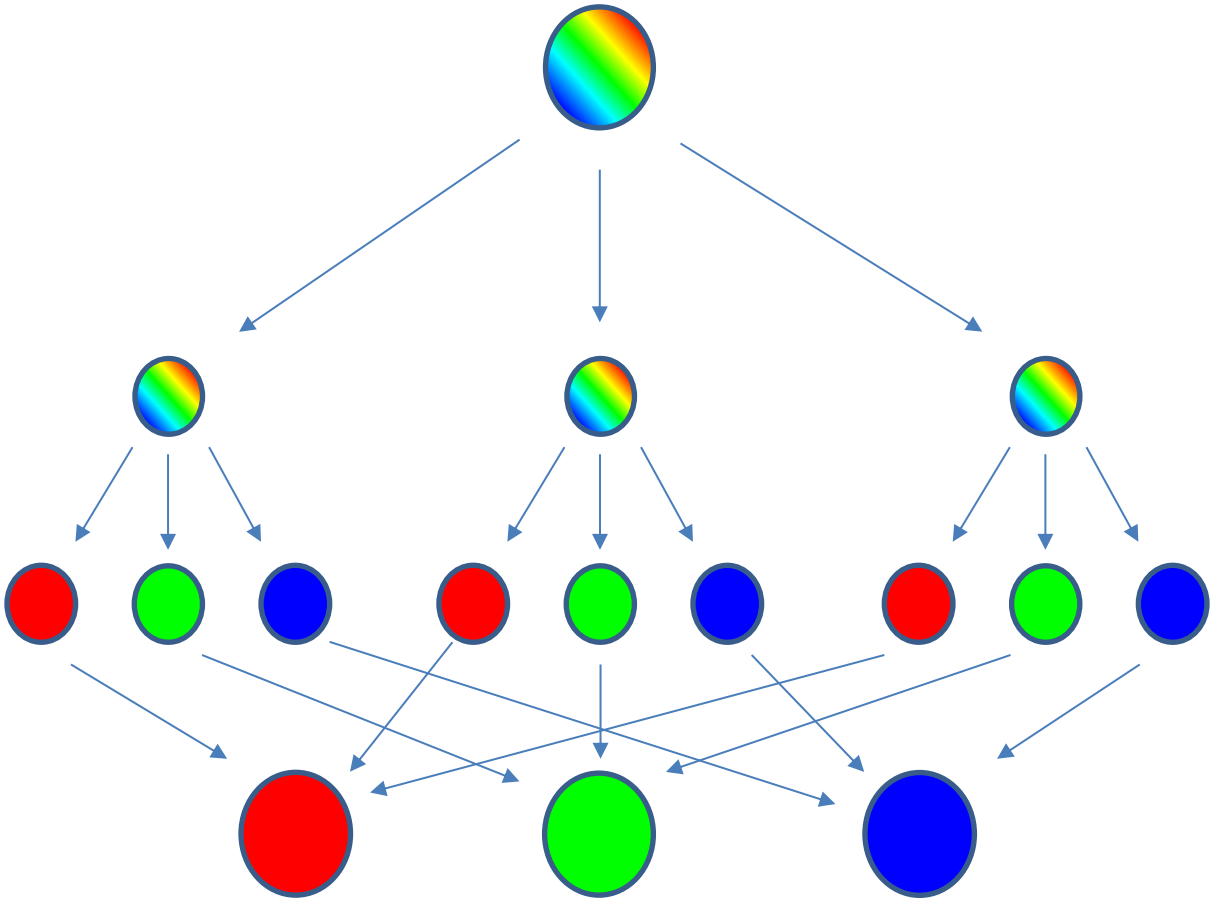
- Additional cognitive load
- May be difficult for novice
- Language, syntax, technology overhead

M&M Sorting (Serial)



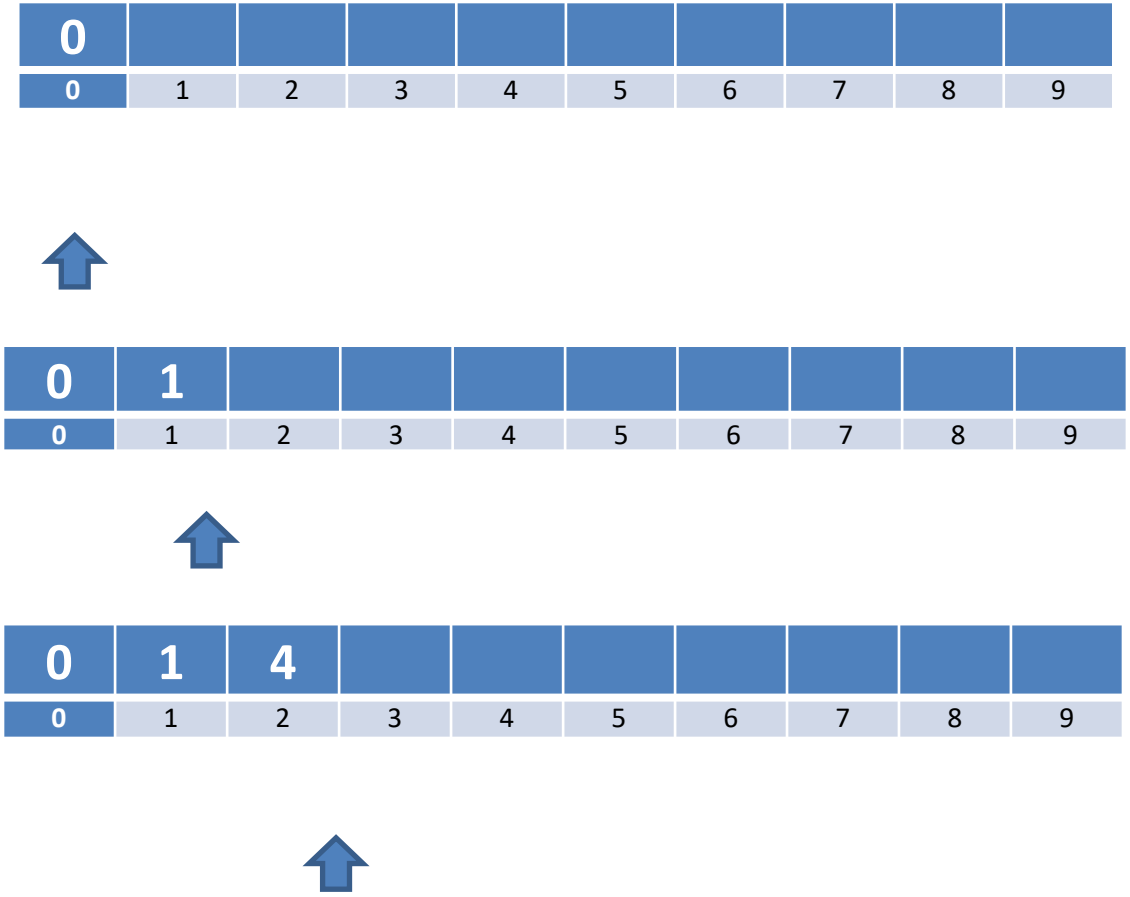
- Time sorting by color by one student
- Time sorting by multiple students

M&M Sorting (Parallel Version)



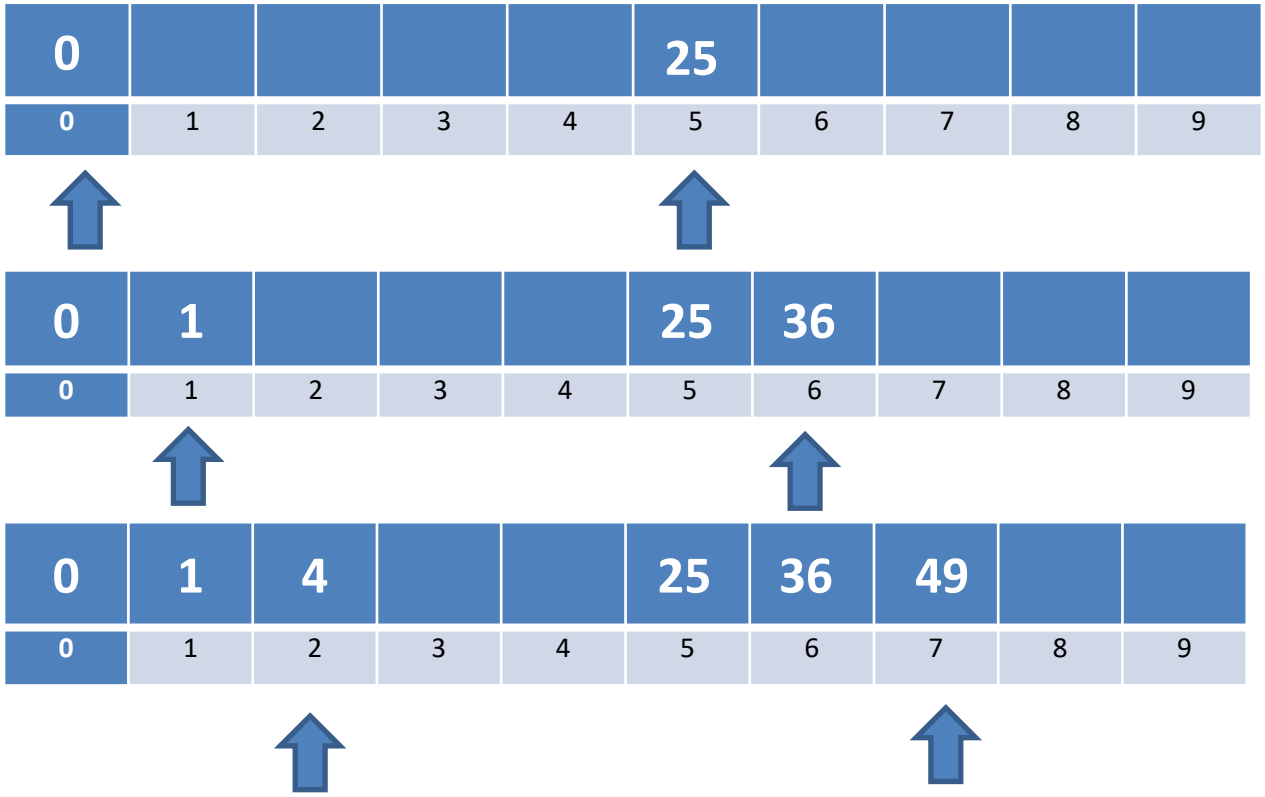
PDC Concept	Bloom Level
Concurrency	C
Decomposition	C
Parallel Overhead	C
Speed Up	C
Sequential Dependency	C

Array Filling (Sequential)



- Draw an Array on the Board
- One student fills up the cells using with output of a function (ex. $f(x) = x^2$)
- Time by one student vs two student

Array Filling(Parallel)



PDC Concept	Bloom Level
Concurrency	C
Speed Up	C
Load Imbalance	K/C

More Activities at ….

- **iPDC Modules**

- PDC Unplugged