

# Smartphone assembly problem formulation

## Variables:

- W x H Grid of ones (mount points get value 0)
- R robotic arms
- T tasks
- L time
- P Mountpoints

## Approach:

### Local variables:

Path\_vector: vector of paths from mount points to first job in each task

### Pseudo code:

1. Foreach task "t" in Tasks:
  - Foreach mountpoint "mp" in MountPoints:
    - Compute the distance mp -> First Job in the task
  - Pair the task "t" with "mp" having shortest path
  - Append path\_vector with the shortest path
2. Sort path\_vector in increasing order
3. Foreach task "t" in Tasks:
  - Foreach robotic arm "r":
    - Foreach job "j" in task "t":
      - Run job "j"
      - Update grid occupancy
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