

# Project Management



## Work Breakdown Structure and the "Yellow Sticky" Process

# The Work Breakdown Structure

## What is a Work Breakdown Structure (WBS)?

An activity oriented family-tree division of work tasks that define the entire project.

# The Work Breakdown Structure

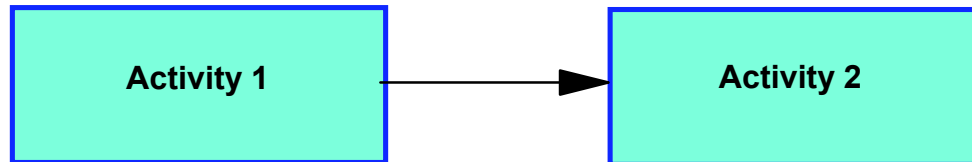
## WBS Terminology:

- **Activity:** A task or work package performed over a period of time.
- **Relationships/Precedence:** Dependencies that exist between activities.
- **Duration:** Length of the period of time to complete a task.
- **Milestone:** Zero time duration activity.
- **Early Start::** The earliest an activity can start based on project logic.
- **Late Start::** The latest an activity can start without delaying a project completion.
- **Early Finish:** The earliest an activity can finish based on early start and duration.
- **Late Finish:** Latest an activity can finish without delaying a project completion.
- **Float:** The amount of time an activity can be delayed without delaying the project finish date.
- **Total Float:** The amount of time that a pathway may be delayed from it's early start without delaying the project finish date.
- **Critical Path:** The longest time period from start to completion of a project; also the shortest total length of the project.

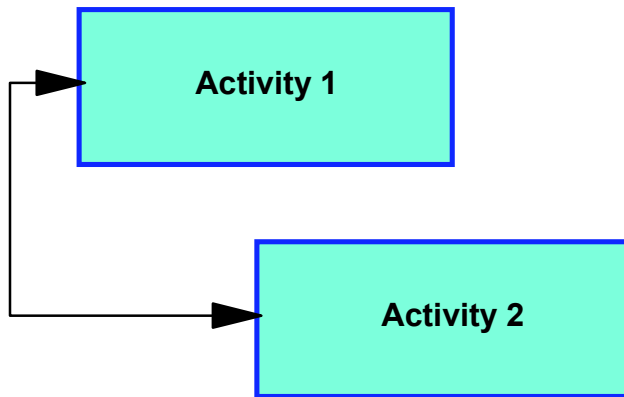
# The Work Breakdown Structure

## Task Relationships:

- **Finish to Start:** Activity 1 must be totally finished before activity 2 can start.



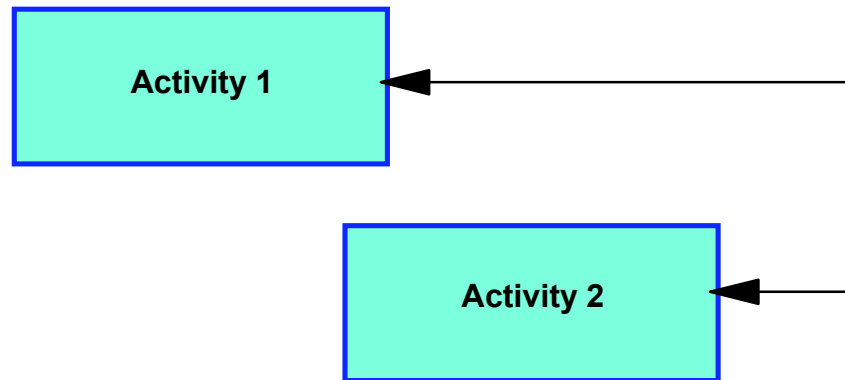
- **Start to Start:** Activity 2 can not start before activity 1 starts.



# The Work Breakdown Structure

## Task Relationships:

- **Finish to Finish:** Activity 2 can not finish until activity 1 finishes.



# The Work Breakdown Structure

## "Yellow Sticky" Exercise:

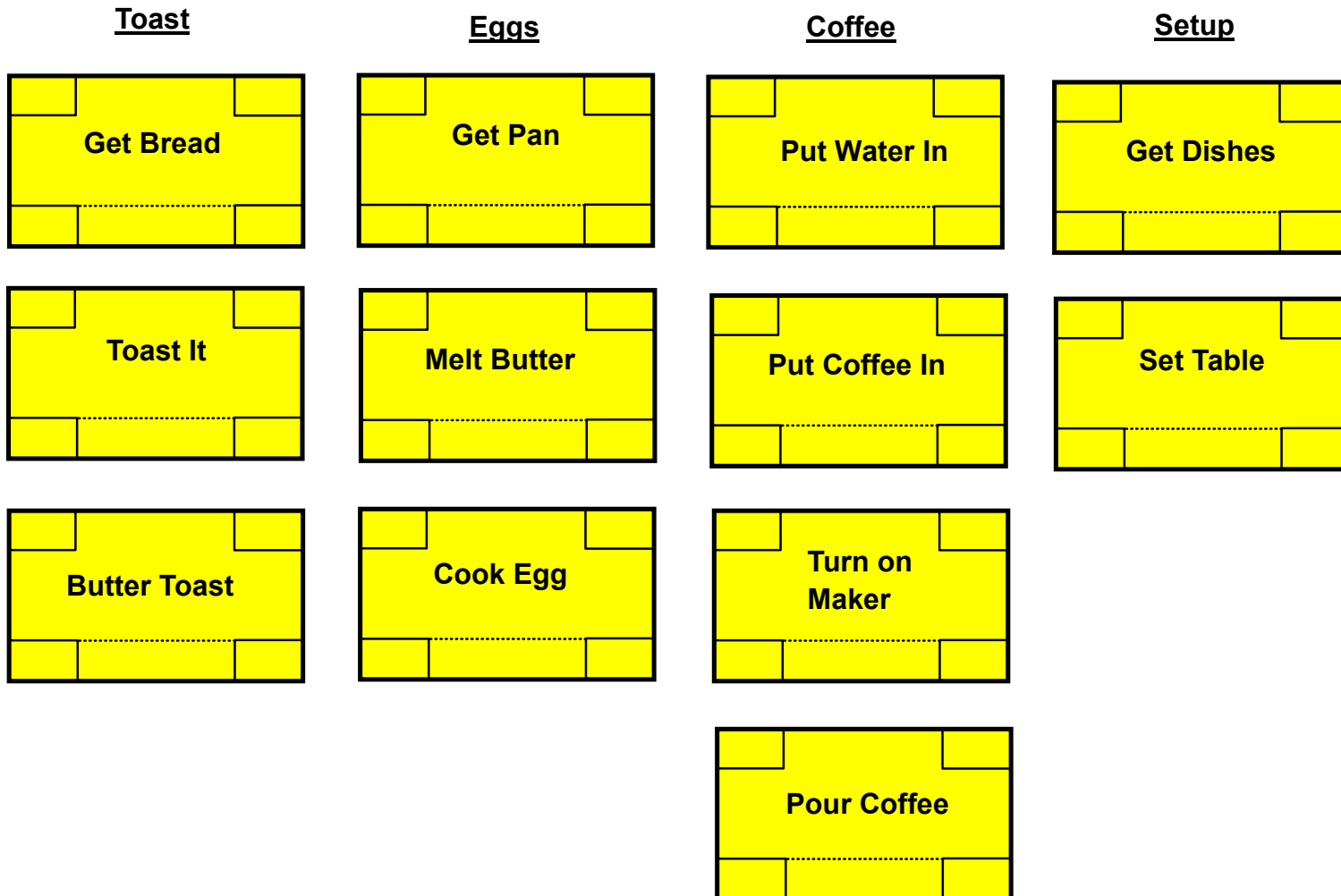
Early Start		Early Finish
<b>Task Name / Brief Description:</b>		
Late Start	Duration: Resource:	Late Finish

**Uses 3 X 5 Yellow Stickum Note Pads**

# The Work Breakdown Structure

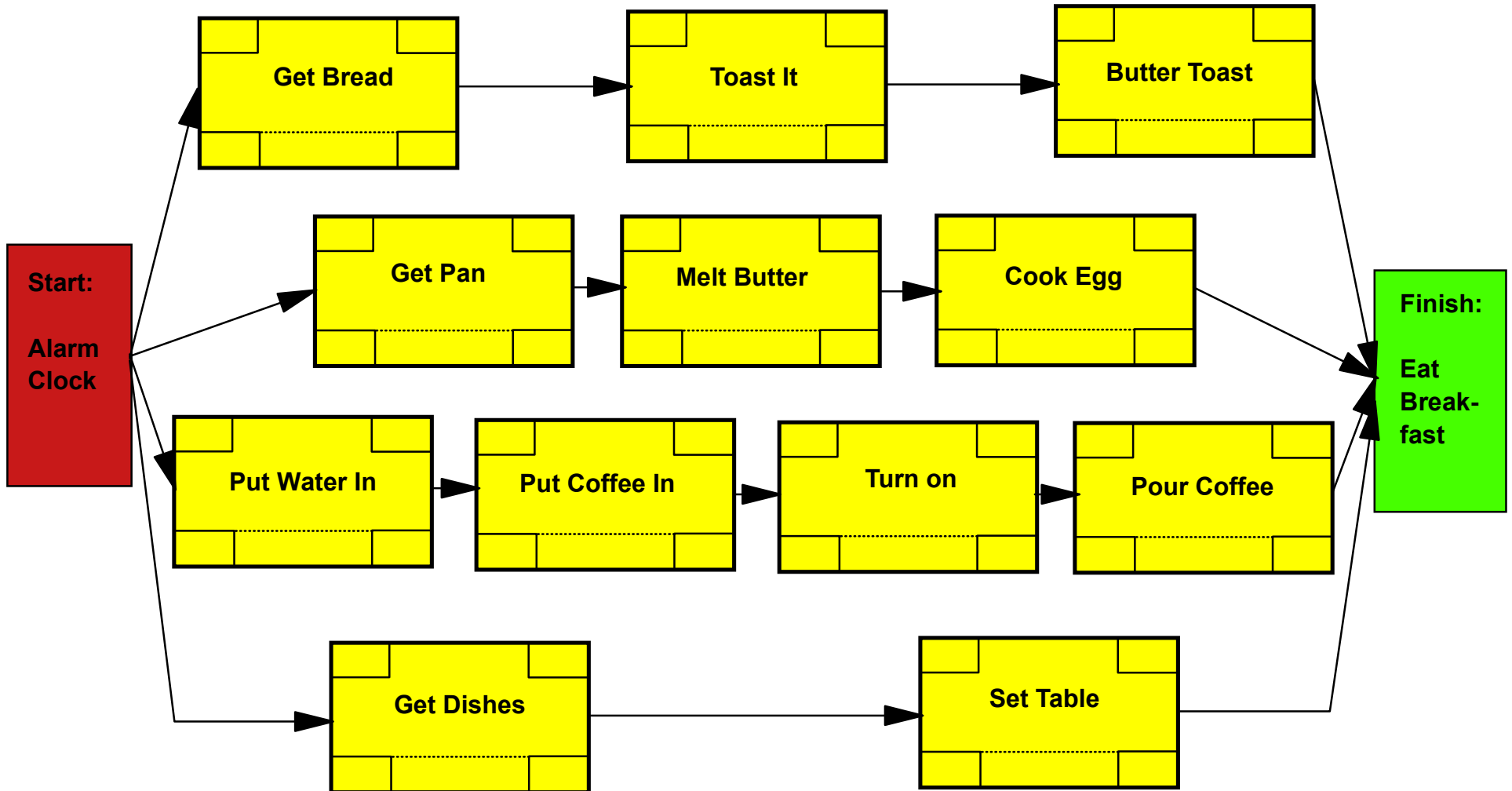
## Yellow Sticky Exercise: Make Breakfast - Activities/Tasks

To Make: Toast, Eggs, and Coffee



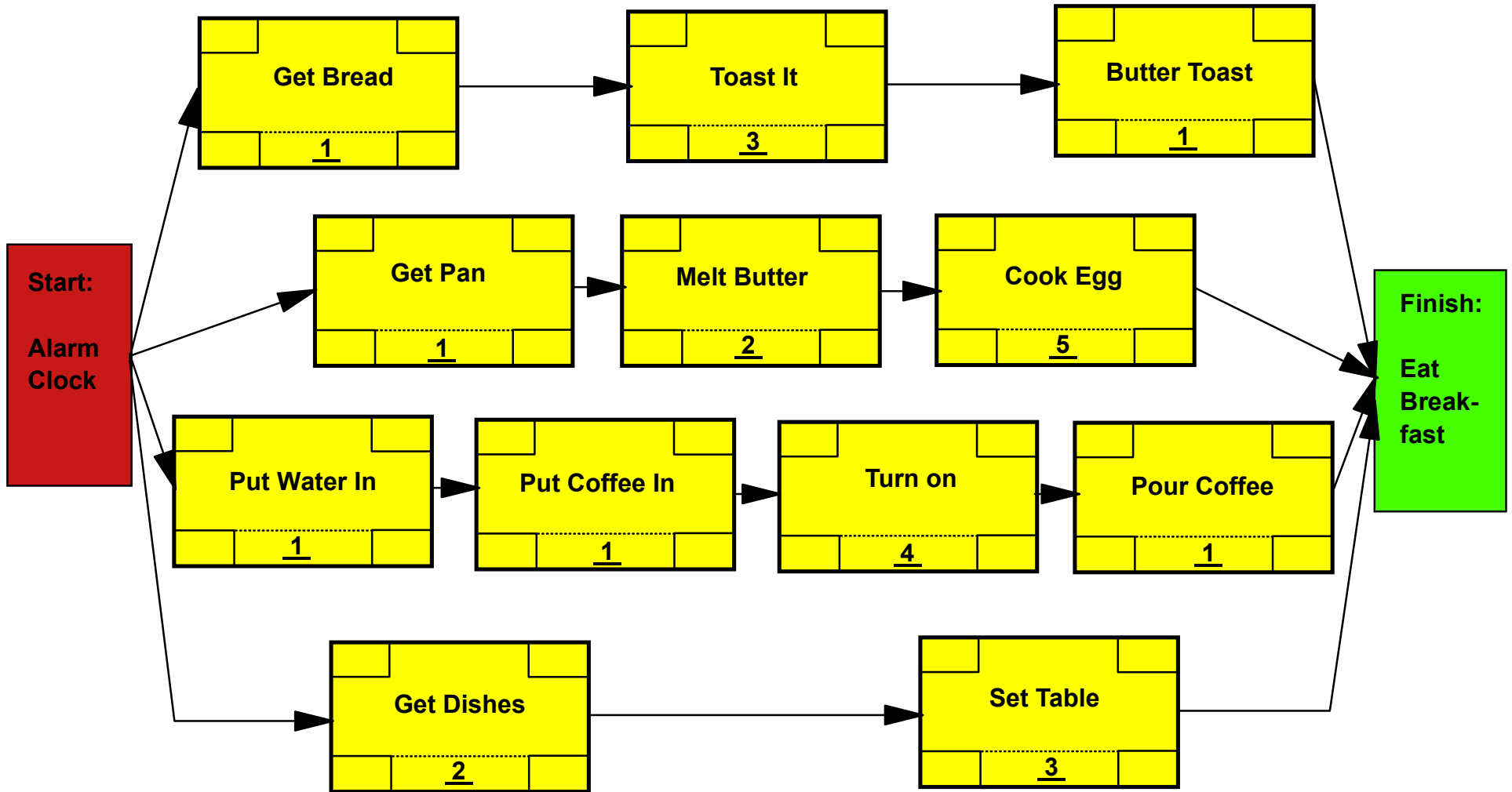
# The Work Breakdown Structure

## Yellow Sticky Exercise: Make Breakfast - Set Precedence



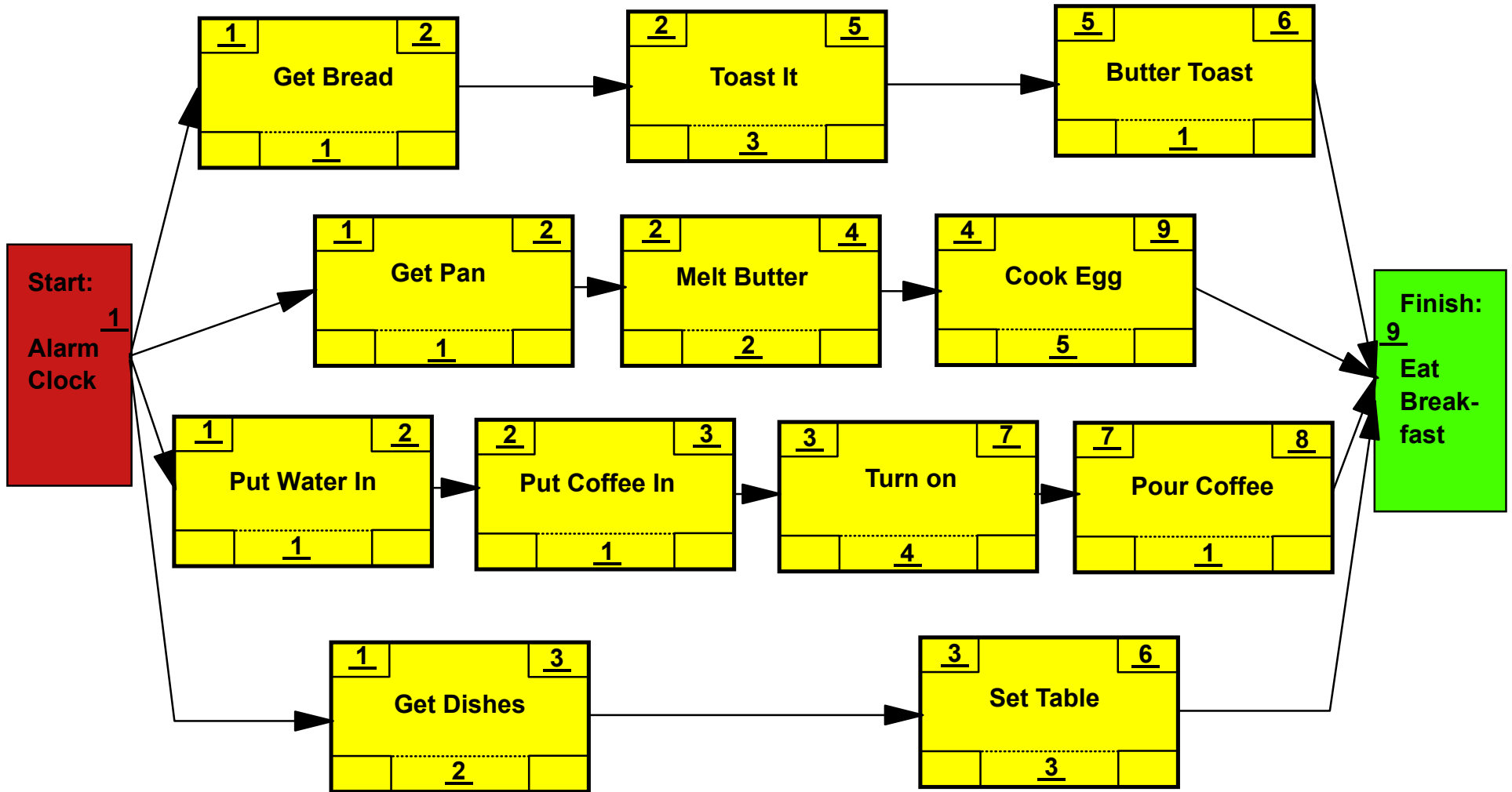
# The Work Breakdown Structure

## Yellow Sticky Exercise: Make Breakfast - Add Durations



# The Work Breakdown Structure

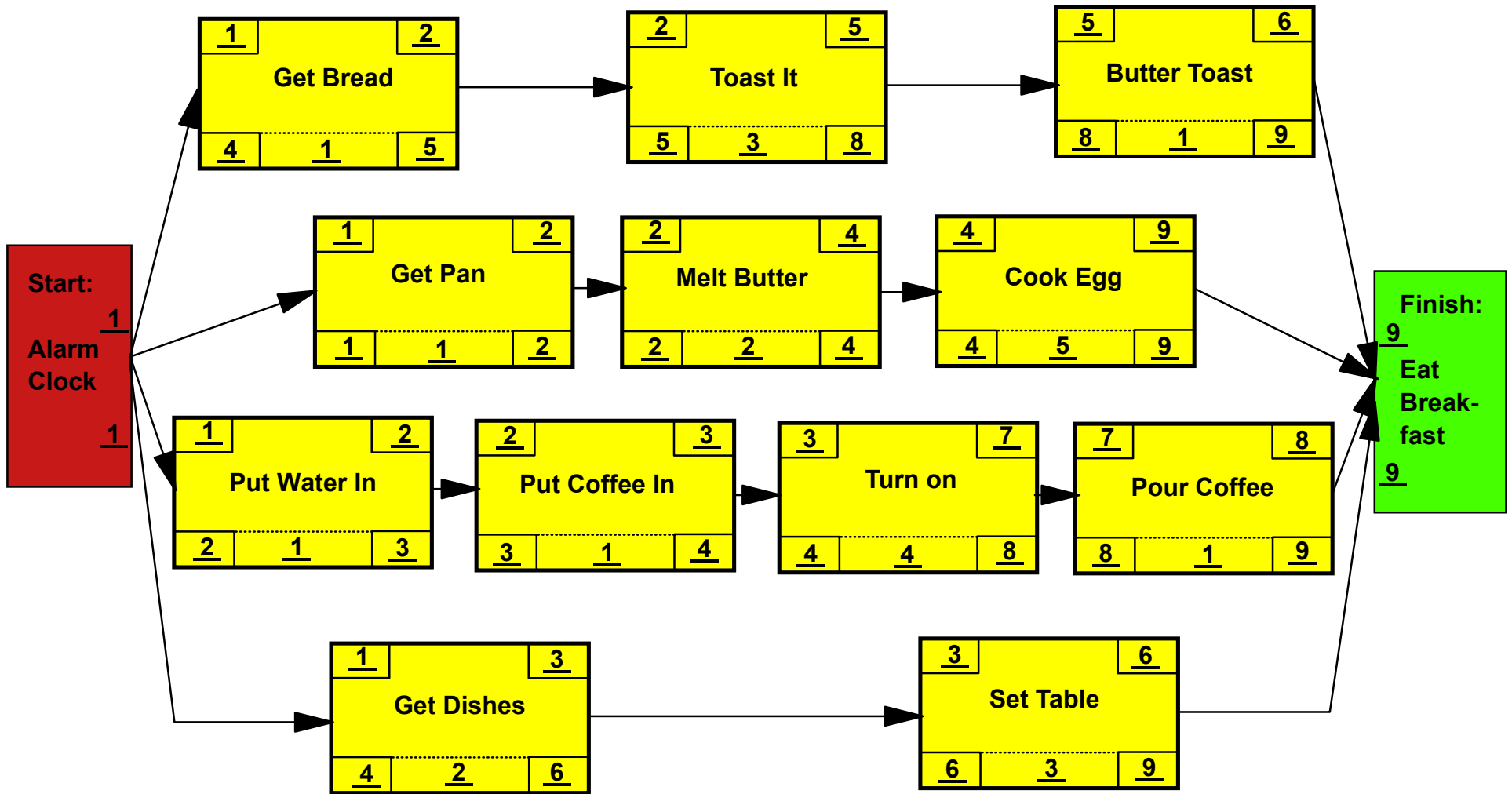
## Yellow Sticky Exercise: Make Breakfast - Perform Forward Pass



Determine Early Start and Early Finish

# The Work Breakdown Structure

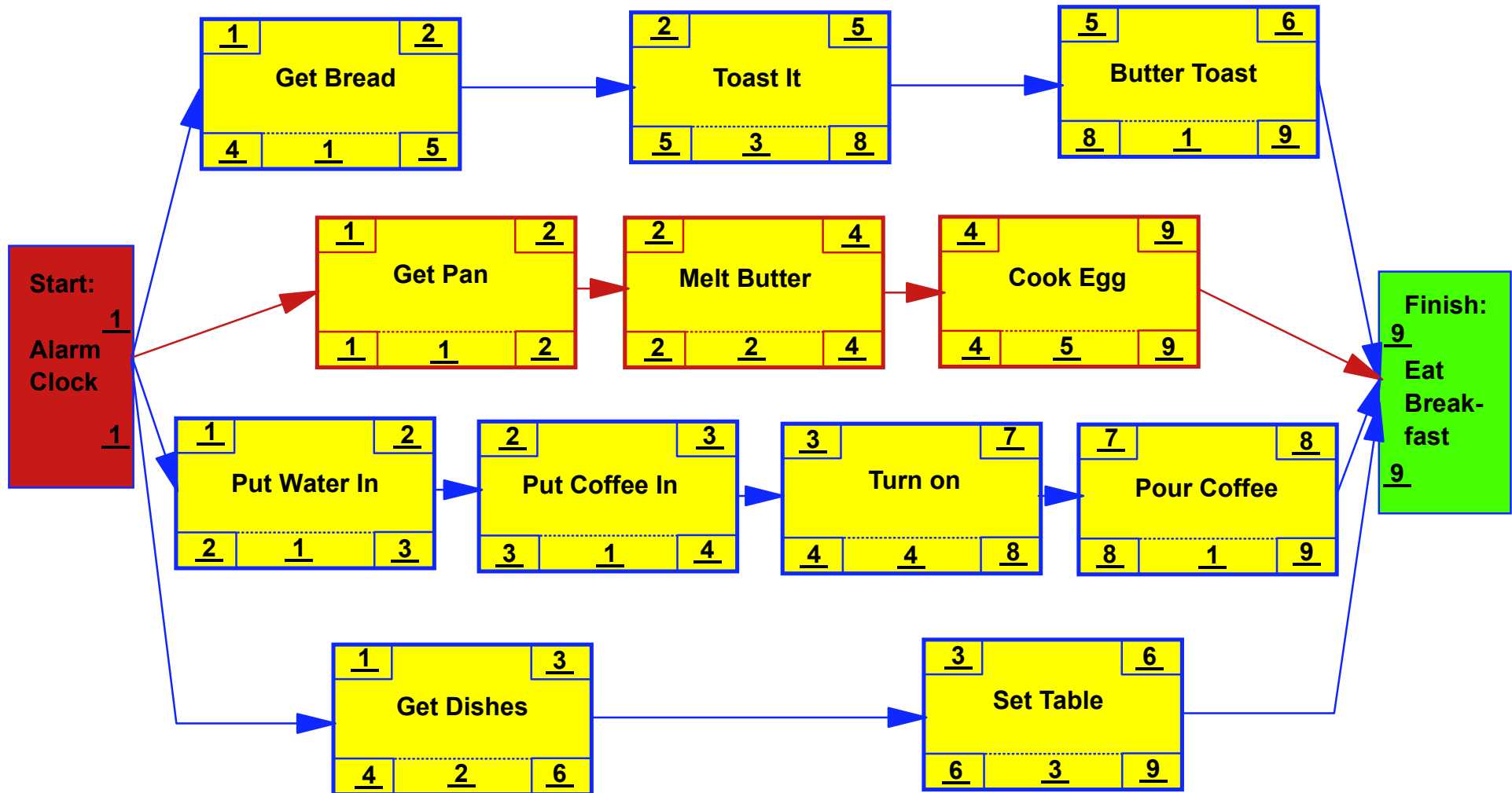
## Yellow Sticky Exercise: Make Breakfast - Perform Backward Pass



Determine Late Start and Late Finish

# The Work Breakdown Structure

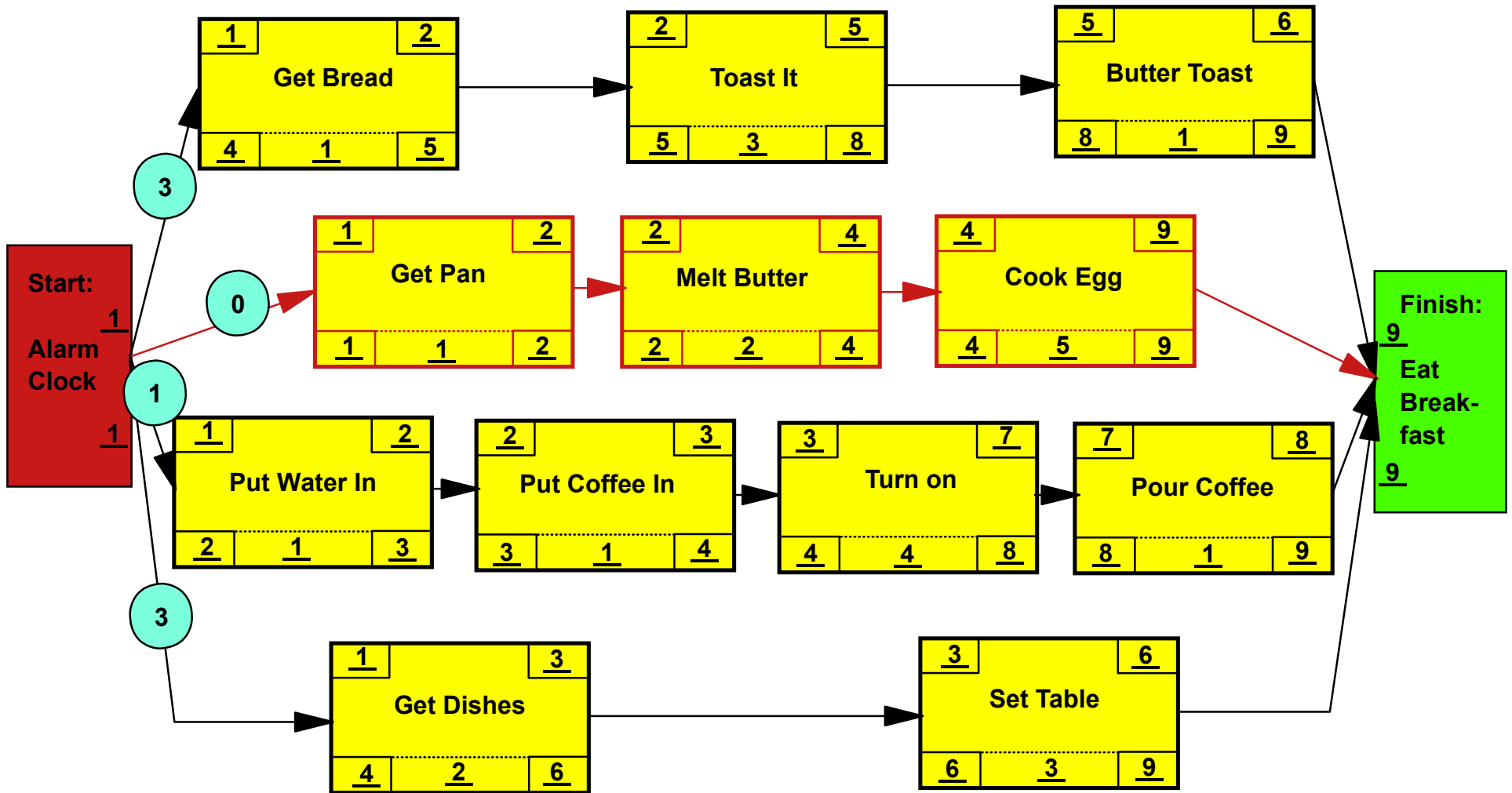
## Yellow Sticky Exercise: Make Breakfast - Determine Critical Path



**Key: Any actions to shorten the overall project plan must be done to the critical path.**

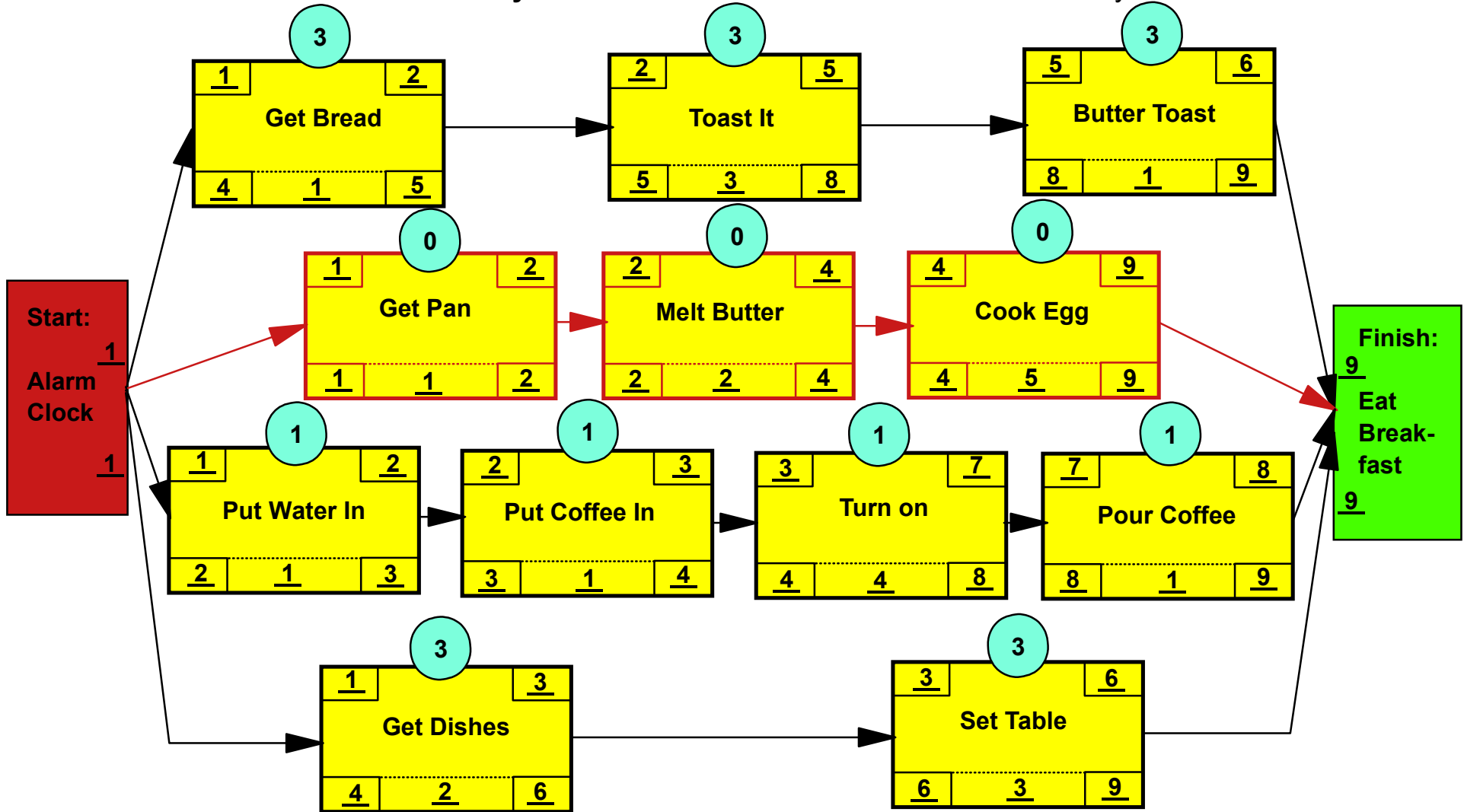
# The Work Breakdown Structure

## Yellow Sticky Exercise: Make Breakfast - Determine Total Float



# The Work Breakdown Structure

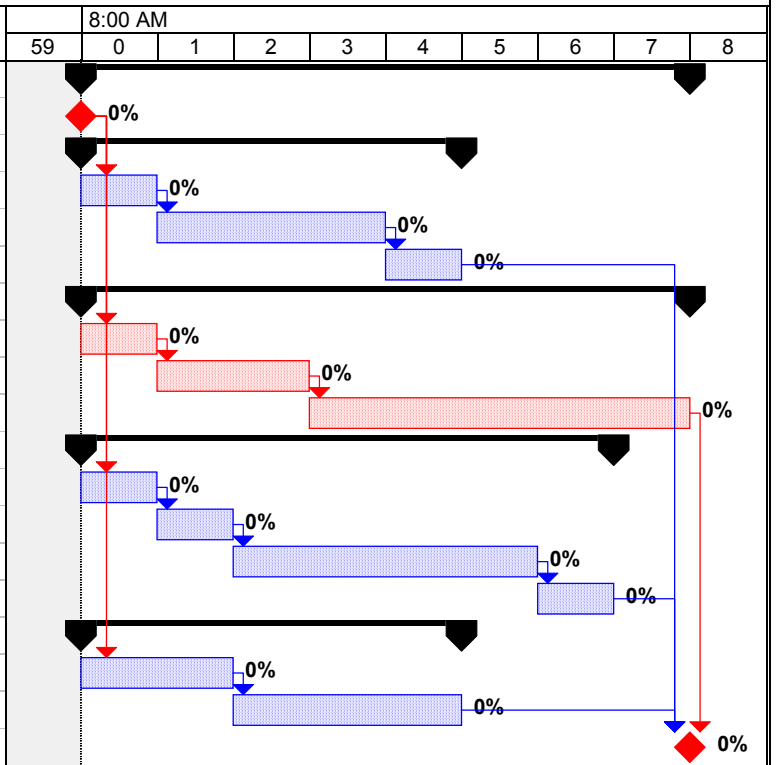
Yellow Sticky Exercise: Make Breakfast - Determine Activity/Task Float



Activity/Task Float (Exclusive / Or) - Any one task on a pathway can use the total float, or the total float can be shared among all of the tasks on the pathway. However, the total float can not be exceeded without affecting the project end date.

## Project Management - WBS Example

ID	Te	Name	Duration	Start	Finish	8:00 AM									
						59	0	1	2	3	4	5	6	7	8
1		<b>WBSexamp Project</b>	<b>0.02 days</b>	<b>Tue 6/1/04</b>	<b>Tue 6/1/04</b>	▼									
2		Wake Up	0 mins	Tue 6/1/04	Tue 6/1/04	▼									
3		<b>Toast</b>	<b>0.01 days</b>	<b>Tue 6/1/04</b>	<b>Tue 6/1/04</b>	▼									
4		Get Bread	1 min	Tue 6/1/04	Tue 6/1/04	▼									
5		Toast Bread	3 mins	Tue 6/1/04	Tue 6/1/04	▼									
6		Butter Toast	1 min	Tue 6/1/04	Tue 6/1/04	▼									
7		<b>Eggs</b>	<b>0.02 days</b>	<b>Tue 6/1/04</b>	<b>Tue 6/1/04</b>	▼									
8		Get Pan	1 min	Tue 6/1/04	Tue 6/1/04	▼									
9		Melt Butter	2 mins	Tue 6/1/04	Tue 6/1/04	▼									
10		Cook Egg	5 mins	Tue 6/1/04	Tue 6/1/04	▼									
11		<b>Coffee</b>	<b>0.01 days</b>	<b>Tue 6/1/04</b>	<b>Tue 6/1/04</b>	▼									
12		Put Water In	1 min	Tue 6/1/04	Tue 6/1/04	▼									
13		Put Coffee In	1 min	Tue 6/1/04	Tue 6/1/04	▼									
14		Turn on Coffee Maker, Wait	4 mins	Tue 6/1/04	Tue 6/1/04	▼									
15		Pour Coffee	1 min	Tue 6/1/04	Tue 6/1/04	▼									
16		<b>Setup</b>	<b>0.01 days</b>	<b>Tue 6/1/04</b>	<b>Tue 6/1/04</b>	▼									
17		Get Dishes	2 mins	Tue 6/1/04	Tue 6/1/04	▼									
18		Set Table	3 mins	Tue 6/1/04	Tue 6/1/04	▼									
19		Eat	0 mins	Tue 6/1/04	Tue 6/1/04	▼									



## Project Management - WBS Example

ID	Te	Name	Duration	Start	Finish	8:00 AM							
						59	0	1	2	3	4	5	6
1		<b>WBSexamp1 Project</b>	<b>0.01 days</b>	<b>Tue 6/1/04</b>	<b>Tue 6/1/04</b>	▶							
2		Wake Up	0 mins	Tue 6/1/04	Tue 6/1/04	▶							
3		<b>Toast</b>	<b>0.01 days</b>	<b>Tue 6/1/04</b>	<b>Tue 6/1/04</b>	▶							
4		Get Bread	1 min	Tue 6/1/04	Tue 6/1/04	▶							
5		Toast Bread	3 mins	Tue 6/1/04	Tue 6/1/04	▶							
6		Butter Toast	1 min	Tue 6/1/04	Tue 6/1/04	▶							
7		<b>Eggs</b>	<b>0.01 days</b>	<b>Tue 6/1/04</b>	<b>Tue 6/1/04</b>	▶							
8		Get Pan	1 min	Tue 6/1/04	Tue 6/1/04	▶							
9		Cook Egg	5 mins	Tue 6/1/04	Tue 6/1/04	▶							
10		<b>Coffee</b>	<b>0.01 days</b>	<b>Tue 6/1/04</b>	<b>Tue 6/1/04</b>	▶							
11		Put Water In	1 min	Tue 6/1/04	Tue 6/1/04	▶							
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16		Get Dishes	2 mins	Tue 6/1/04	Tue 6/1/04	▶							
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18		Eat	0 days	Tue 6/1/04	Tue 6/1/04	▶							

