



Crash course Planning & estimation *(Baking a pie)*

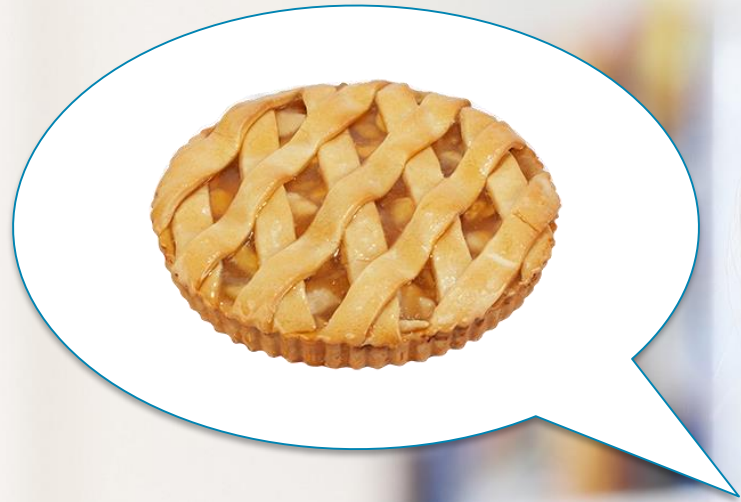


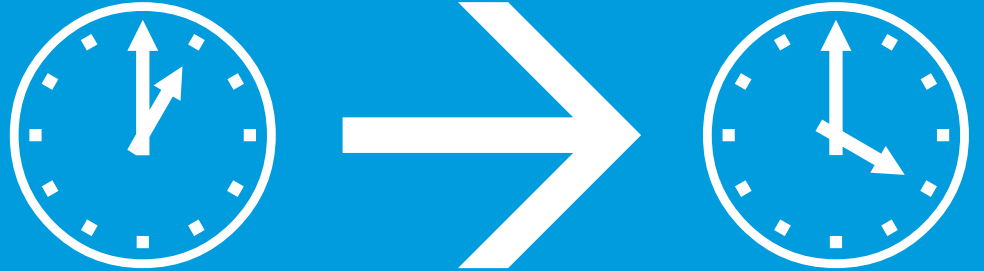
Ard Willems
Technical Manager



Anton van Gelderen
Technical Manager







Can you make it?

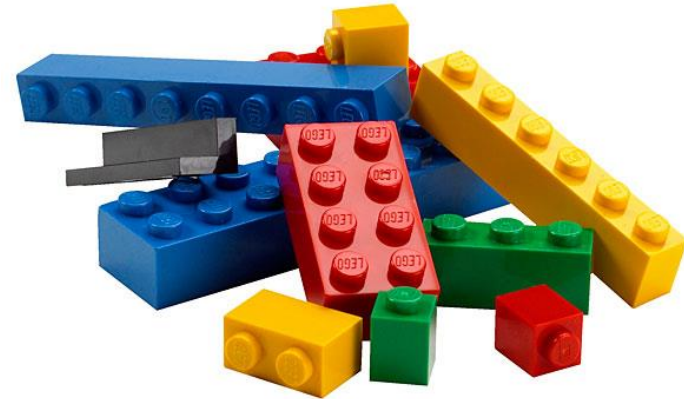


ALTE N

Work Breakdown Effort Estimation Planning



Work Breakdown Effort Estimation Planning





We need a recipe!

Recipe from:

Date:

Apple Pie

6 Cooking apples

$\frac{1}{2}$ to $\frac{2}{3}$ c sugar

2 Tablespoon flour

1 T butter

2 T lemon juice

1 Teaspoon cinnamon

Prep + slice apples. Mix dry ingredients together + mix with apples. Pour into piecrust and dot with butter + lemon juice.

may or may not top with pastry. Bake 450°F for 15 mi, reduce to 350°F for 45 mi.

Serves:

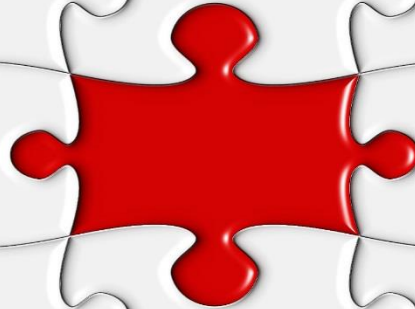
1. Cut apples
2. Make dough
3. Fill baking mold
4. Bake
5. Cooldown

Is the work
breakdown
complete?

Ingredients?



Be complete



Recipe from:

Date:

Apple Pie

6 Cooking apples

$\frac{1}{2}$ to $\frac{2}{3}$ c sugar

2 Tablespoon flour

1 T butter

2 T lemon juice

1 Teaspoon cinnamon

Peel & slice apples. Mix dry ingredients together & mix with apples. Pour into piecrust and dot with butter & lemon juice.

may or may not top with pastry. Bake 450°F for 15 mi, reduce to 350°F for 45 mi.

Serves:

1. Buy apples

2. Cut apples

3. Make dough

4. Fill baking mold

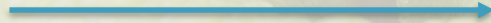
5. Bake

6. Cooldown

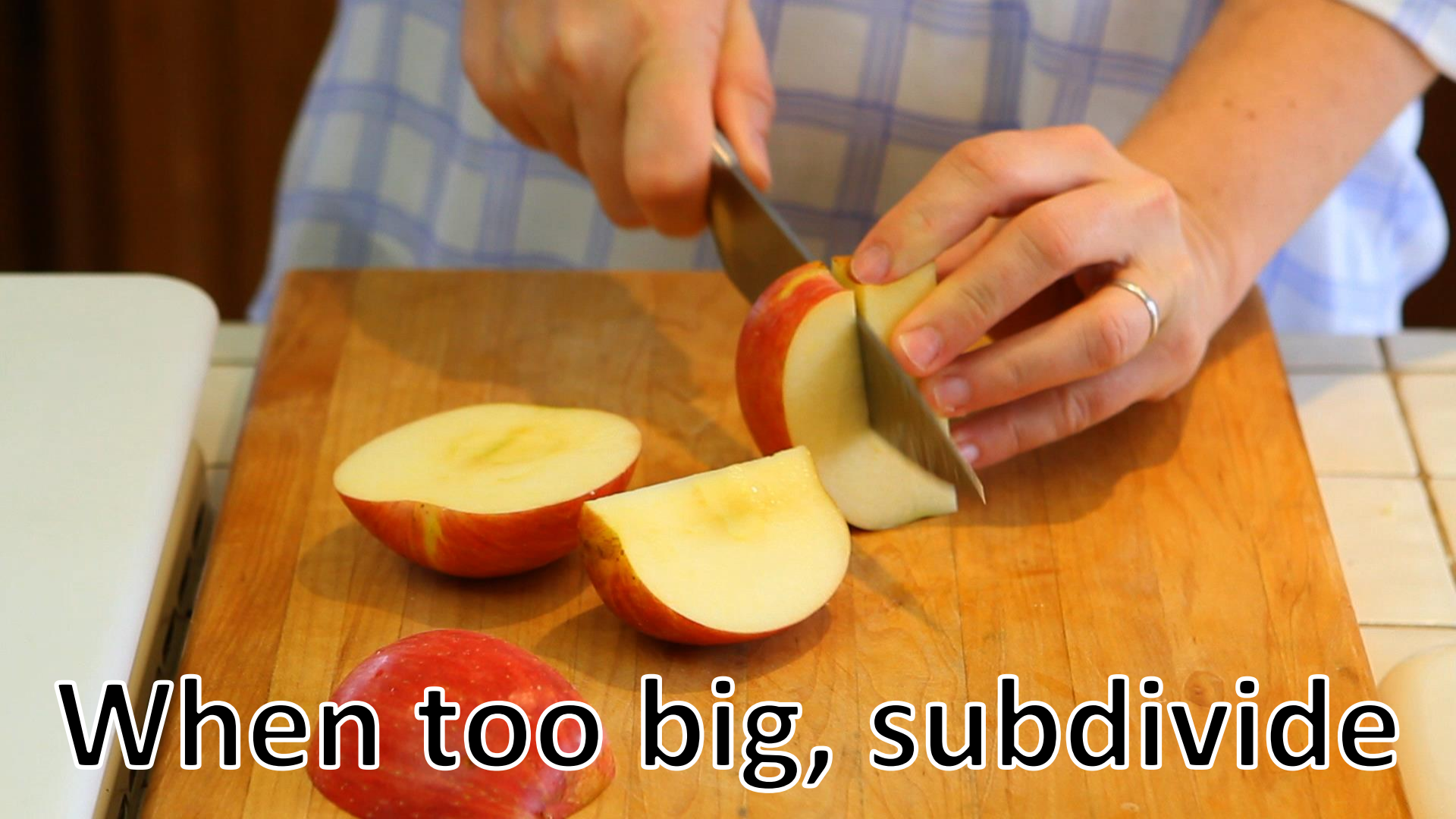
Can we start estimating?

Subdivide

1. Buy apples



- a. Get bike out of shed
- b. Ride to supermarket
- c. Enter supermarket
- d. Get apples
- e. Stand in line
- f. Pay
- g. Ride back home
- h. Put bike in shed



When too big, subdivide



Work Breakdown Effort Estimation Planning



Use historical data

- Use data from previous experiences
- Save metrics

Watch out!

A black bicycle with a wicker basket on the handlebars is leaning against a rough stone wall. The bicycle has 'JAEGER' written on the frame. Three speech bubbles are overlaid on the image, each containing a line of text. The background shows a cobblestone path and a building with classical architectural details.

*I can ride
faster
than that!*

*But last
time my bike
was broken*

*This time I
won't get
lost*

Three point estimation



optimistic

1x



realistic

4x



pessimistic

1x



Uncertainty

How to deal with uncertainty?





Worst case



b. Ride to supermarket



5 minutes



10 minutes



45 minutes

$$(1 \times 5 + 4 \times 10 + 1 \times 45) / 6$$

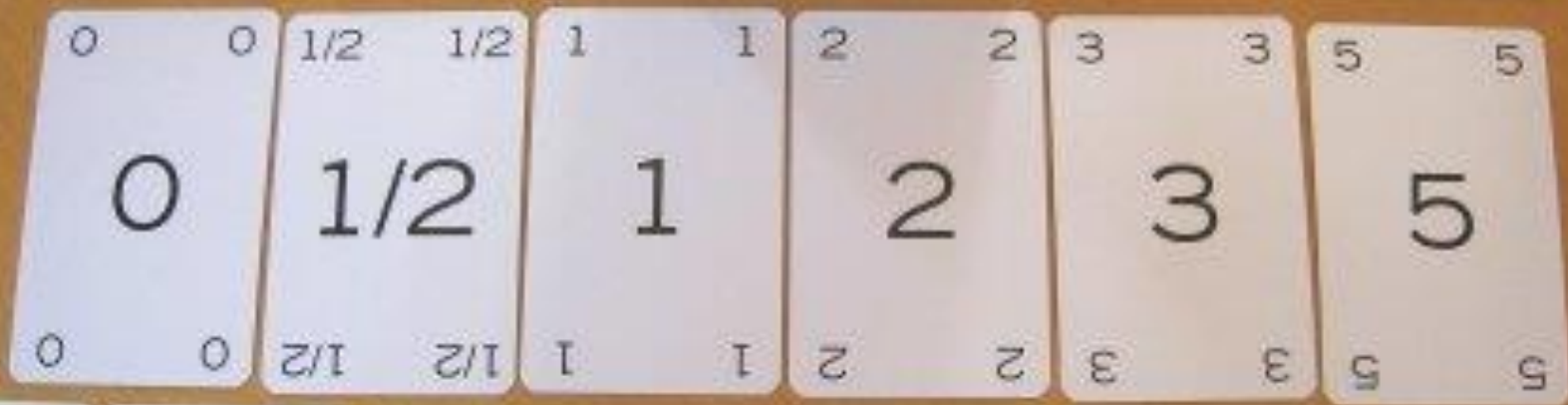
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15 minutes

Wide band delphi



Planning Poker

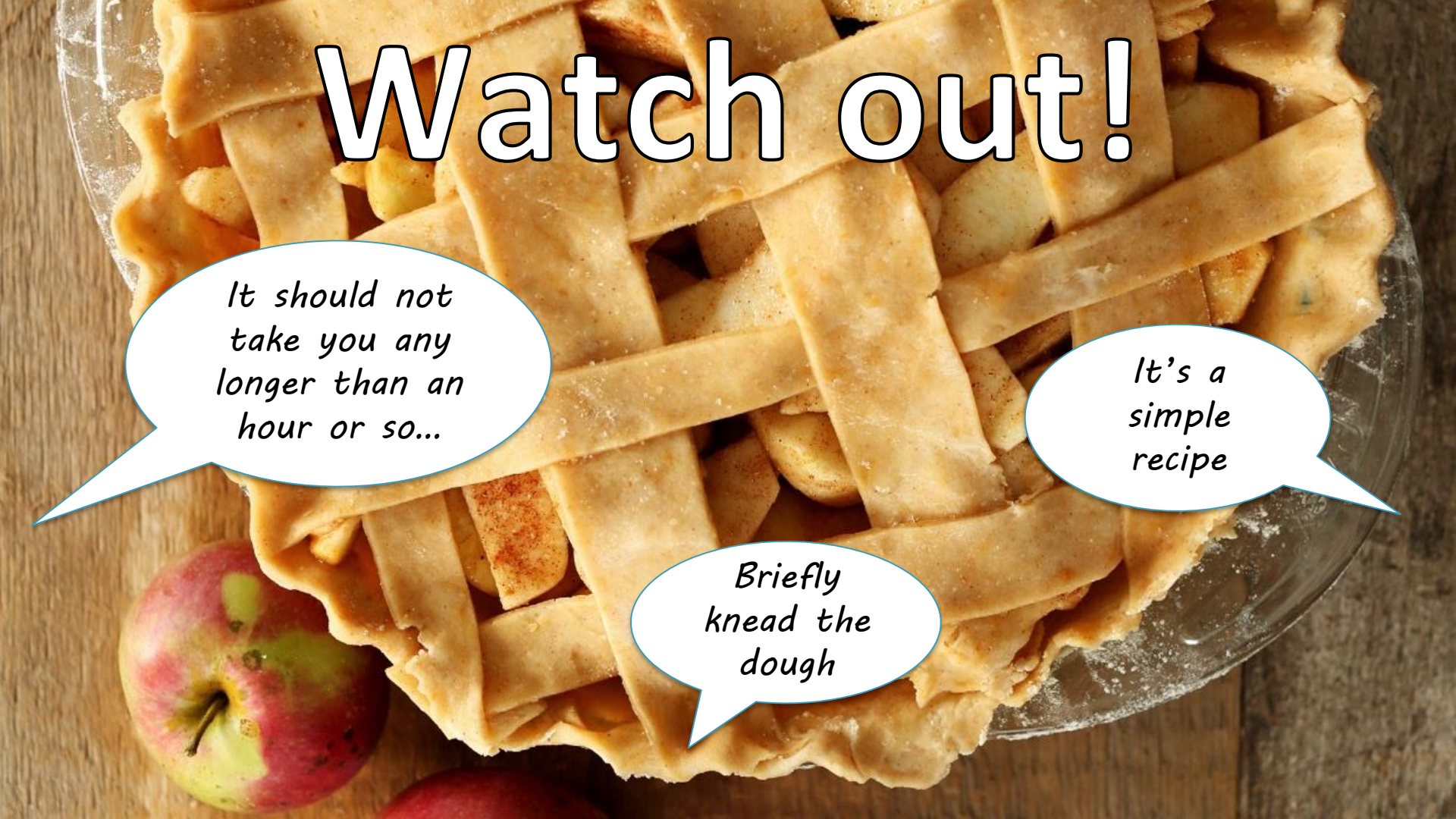


Watch out!

*It should not
take you any
longer than an
hour or so...*

*It's a
simple
recipe*

*Briefly
knead the
dough*



50

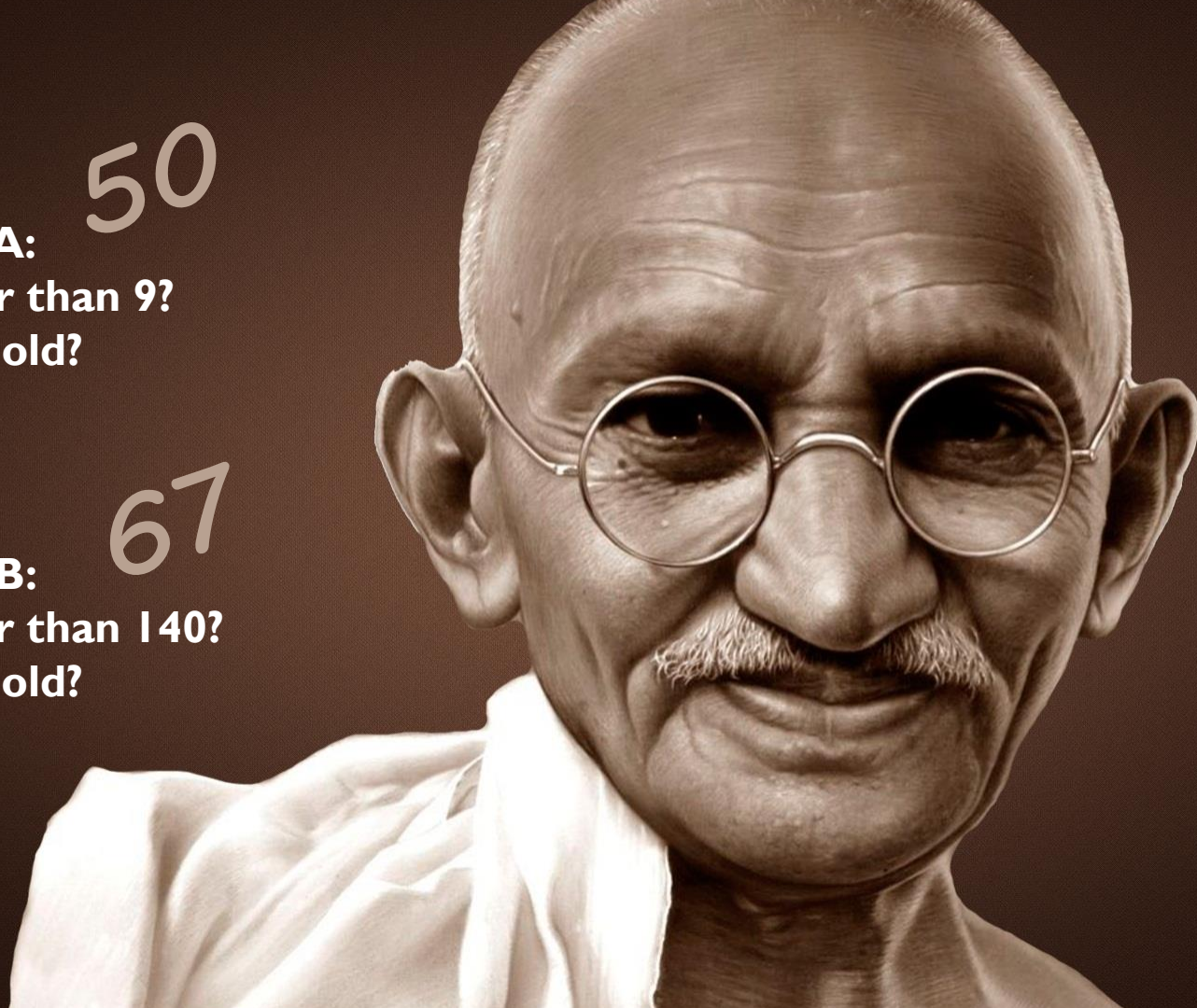
Group A:

1. Older than 9?
2. How old?

67

Group B:

1. Older than 140?
2. How old?



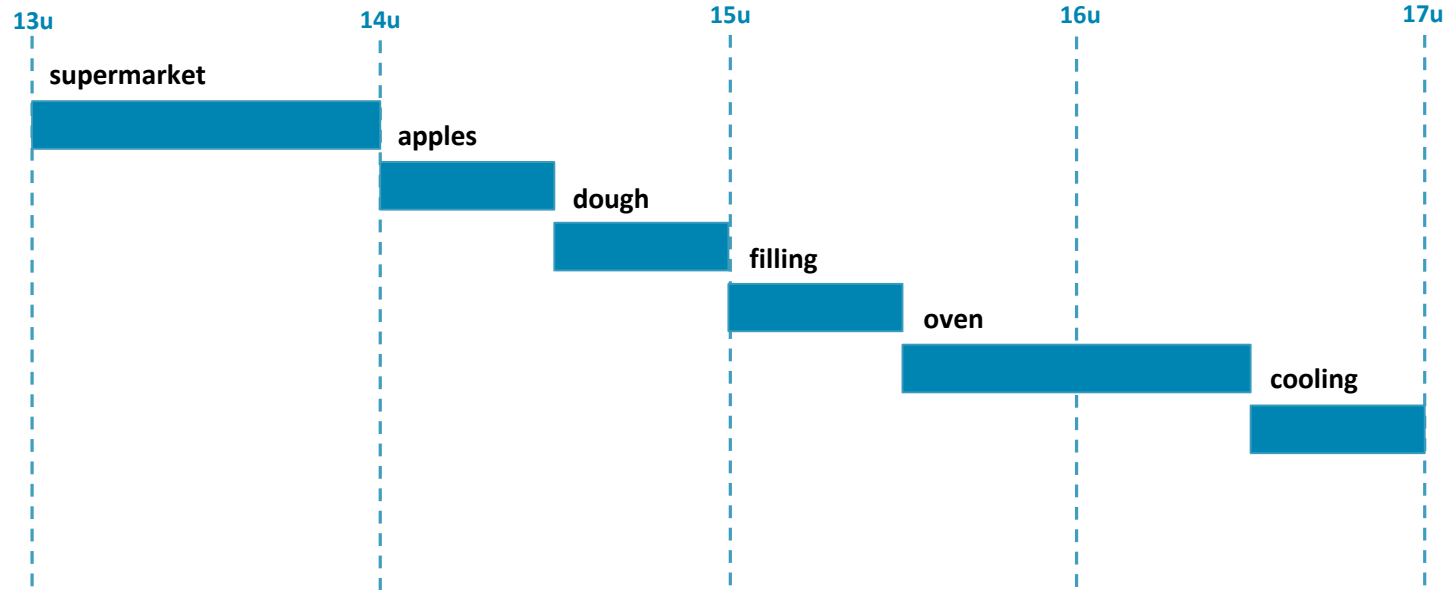
79



Work Breakdown Effort Estimation Planning

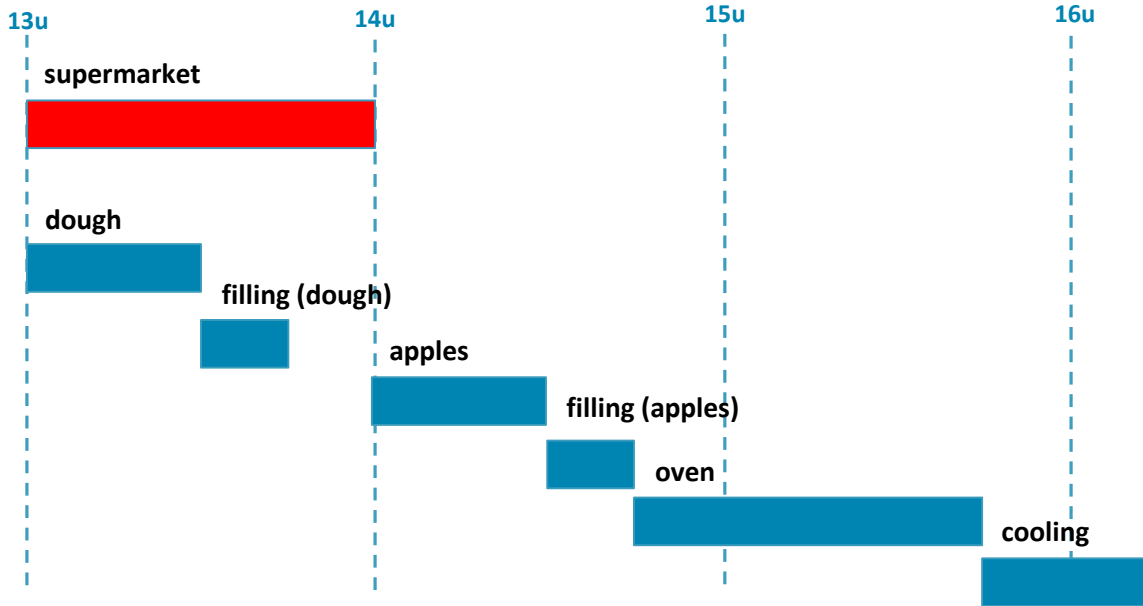


Gantt chart



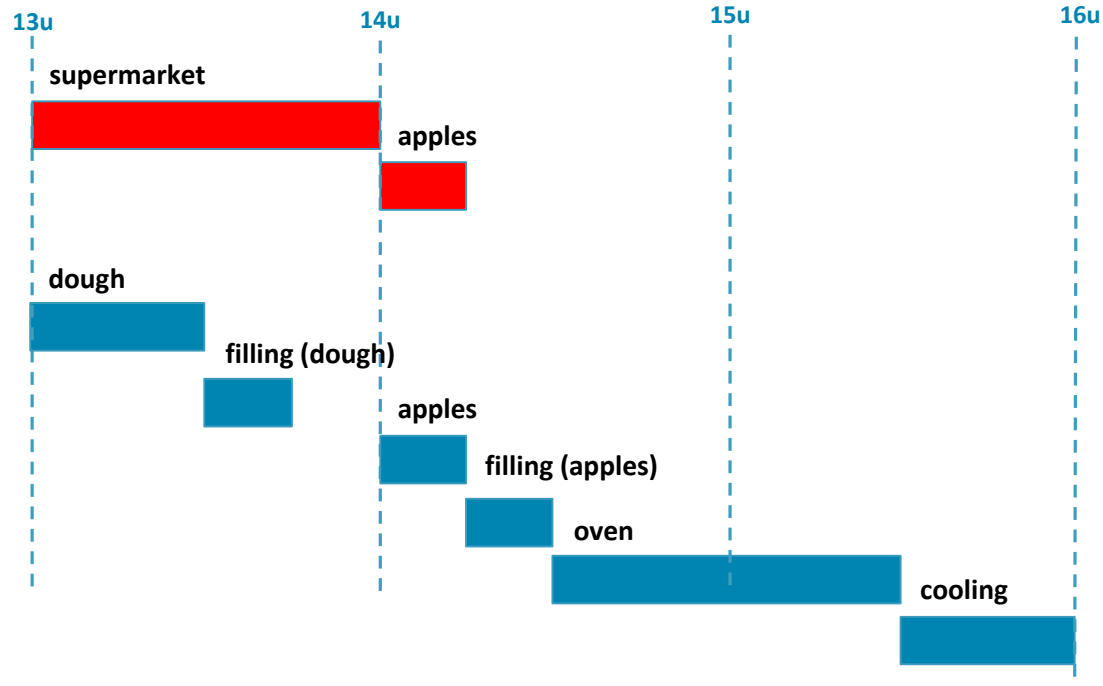
Effort = Throughput time = 4 hours

Gantt chart



Effort > Throughput time = 3 hours, 15 minutes

Gantt chart



Throughput time = 3 hours

