Practical – Number Multitasking Kanban Game

Learning Outcomes:

1. Using games and simulations to teach the principles of Kanban.
2. Illustrate the value of limiting WIP (Work in Progress) in SDLC.
3. Leading discussions that help teams understand Kanban and apply these principles in school or when they enter the workforce.

Activity

This game is a simple simulation that can be played with a group. With your group formed for Module Assignment, each member will perform the tasks assigned to your team. Select a team leader who will record the team members' performance, facilitate discussions, and submit the team's reflection to Brightspace at the end of the lesson.

This simulation game is another way to illustrate the value of limiting WIP. The Number Multitasking Game takes other aspects of software developer work into consideration. The discussion after the game will be about multitasking and the bad effects of having worked pushed to you. The game will take 20 minutes to run for a team of 3 players plus a leader.

What you need to play the game:

The team needs the following to play the game:

- 3 different-colored pens per player
- 2 sheets of paper per player
- A manager who times each player (this role can be played by the team leader)
- A stopwatch (or a phone with a stopwatch application)

How to play:

The team leader will request team members to help with three *important* tasks that your organization has coming up. Here are the tasks:

1. Write the roman numerals I through X in a column from top to bottom. Use a **black pen** for this task.
2. Write the letters A through J in another column from top to bottom. Use a **red pen** for this task.
3. Write the numbers 1 through 10 in a final column from top to bottom. Use a **blue pen** for this task.

Introduce all the tasks as top priorities and vital to the company's survival. In the first iteration*, the team leader will utilize the "resources" (the players) to the fullest and therefore want them to spend equal amounts of time on each project, because they're all important. Instruct the players to write row by row.

Here is an example of someone going through the first three rows**:

1 Roman Numerals   Letters   Numbers
       (I – X)   (A - J)   (1 – 10)
         I   A   1

2 Roman Numerals   Letters   Numbers
       (I – X)   (A - J)   (1 – 10)
         I   A   1
        II   B   2

3 Roman Numerals   Letters   Numbers
       (I – X)   (A - J)   (1 – 10)
         I   A   1
        II   B   2
       III   C   3

The team leader will time all member teams for each task as well as record the total time (when all the tasks are done). When the iteration is over, note the time for each task under it on the paper (or on the whiteboard).

You'll find that each task takes quite a long time to complete (usually over a minute) and that all of them are finished with just a couple of seconds in between. An example result is shown in the table to the right.

	Row by row
Roman	1:20:0
Letters	1:22:0
Numbers	1:24:0
Total	1:24:0

Leave a few seconds for reflection but then move on to the next iteration. Team leader will explain the first task (roman numerals) is the most important one. The letters task is the second most important, and the numbers turn out to not be that important at all.

Ask the team members to do it again, but this time <u>focus on what's most important first and finish it before continuing to the next task</u>. In other words, work column by column, like this***:

1   Roman Numerals   Letters   Numbers
        (I – X)   (A - J)   (1 – 10)
          I
         II
        III
         ...
          X

2   Roman Numerals   Letters   Numbers
        (I – X)   (A - J)   (1 – 10)
          I   A
         II   B
        III   C
         ...   ...
          X   J

3   Roman Numerals   Letters   Numbers
        (I – X)   (A - J)   (1 – 10)
          I   A   1
         II   B   2
        III   C   3
         ...   .
          X   J   10

As before, the team leader will note the time for completing each project and the total time for all the projects to be completed. Please see sample table below:

	Row by row	Column by column
Roman	1:20:0	0:12:0
Letters	1:22:0	0:12:0
Numbers	1:24:0	0:08:0
Total	1:24:0	0:32:0

Questions for discussion:

These are a few of the questions to start a fruitful discussion after playing this game:

- What happened to the total time? Why?
- What happened to the times for each individual project? Why?
- Was the first round harder? Why?
- How did the first approach feel? Did the second approach feel better?

Team leaders will collate the answers to the above questions. Together with the record of each team member's performance for all three projects, the team leader will submit to Brightspace, Week 11 Practical.

Acknowledgement:

The exercise resembles the Multitasking Name Game that Henrik Kniberg uses. Kniberg hints that he, in turn, has adopted his from other simulations he's seen done by others—for example, Mary Poppendieck.

See "The Multitasking Name Game – or How Long Does It Take to Write a Name?" at http://mng.bz/YR06.