

## WHAT IS PAIR PROGRAMMING?

Paired programming is *more* than just working with a partner. **It is a specific computer programming exercise** used by students and professionals to help create better code and better coders.

Research has shown that this exercise can:

- Improve the quality of programs.
- Produce superior code more quickly.
- Improve the learning/growth of the coder.

Practicing this technique correctly should make you a better programmer.

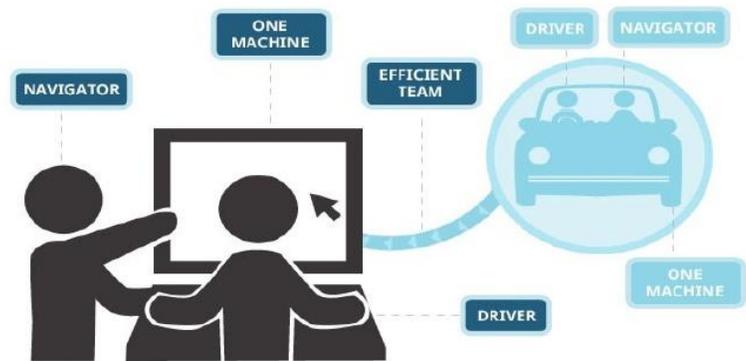
## How does “Pair Programming” work?

It’s a very specific technique where the following **MUST** be done:

- One programmer is **the “driver”**, who is the only one controlling the keyboard and mouse.
- The other is **the “navigator”**, who observes, asks questions, suggests solutions, and thinks about slightly longer-term strategies.
- The two programmers switch roles about every 15 minutes.



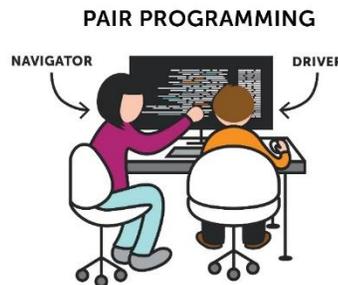
## PAIR PROGRAMMING



With practice pair programming makes learning programming faster and more fun!

## Pair Programming Rules and Guidelines:

1. Pairs must only use one machine with one keyboard and mouse.
2. Only one person is allowed to touch the keyboard and mouse at a time. The navigator should never reach for or touch the hardware.



3. The Navigator and the Driver **MUST** switch positions every 15 minutes. An icon showing two people, one blue and one green, with arrows indicating they have switched positions.
4. Both members of the team need to be **active contributors** and respect each other's ideas.
5. Encourager to your team-mate. Be patient, a good learner, and a good teacher.
6. Slow down. Take your time. Be kind. Nothing important is at stake.
7. Ask for clarification from your partner if you don't understand. Learning is the whole point of the exercise.
8. Expect and accept correction. It's no big deal.
9. Navigators should "*leave some space*". Let the driver fix typos and syntax errors on their own. You don't need to point out every misstep. Stick to the big picture.
10. Referencing specific lines of code in your discussions sometimes helps.
11. Take a break if you need to.