

## Appendix 1: The Pair Programming Guidelines

	<p>If you and your partner are stuck in a silent period and cannot seem to progress, actively break your focus by discussing something completely off-topic and unrelated to the issues at hand. This will allow you to tackle the problem with a fresh outlook.</p>	<p>Following this stage, attempt to:</p> <ul style="list-style-type: none"> <li>- Look back on your last couple of steps and review your previous work;</li> <li>- Identify a fresh start;</li> <li>- Try to think about your end goal when suggesting next steps in order to make progress.</li> </ul>	<p>If your partner is attempting to break focus, do not dismiss this. Breaking one's focus using jokes and private conversations can lead to a fresh perspective, which you and your partner may need.</p>		<p>If you are in disagreement with your partner, you may find it helpful to break for lunch/coffee/etc. – during which you should physically walk away from your desk.</p>	<p>Give your partner space to read the code before suggesting next steps.</p>	<p>Make a note of previously discussed suggestions and reviews so that similar discussions are not unnecessarily repeated over and over.</p>
<p><b>Restarting Guidelines</b></p>	<p>Suggestions and reviews are both useful states that will allow you to drive your work forward. When in these states, feel free to communicate about a range of things; a potential cycle could be as follows:</p> <ul style="list-style-type: none"> <li>- Review previous code</li> <li>- Suggest an improvement</li> <li>- Review methods to be changed</li> <li>- Suggest potential impact</li> </ul>	<p>At any stage, do not hesitate to ask your partner for clarification about any suggestions that they make, or actions they are working on that you do not necessarily understand.</p>	<p>Think about what your partner is saying and doing. Offering an interpretation of your own understanding of the current state can help move the work forward.</p>		<p>Learning to say <i>I don't know</i> or <i>I don't understand</i> is critical. Always explain things immediately – try to avoid replying to a question with <i>you'll see in a while</i>, as this will distract your partner.</p>	<p>Make a note of previously discussed suggestions and reviews so that similar discussions are not unnecessarily repeated over and over.</p>	<p>(<i>for the navigator</i>): Think ahead, since you'll be driving in a short while: what is the current course of action not covering? Is there anything worth verifying that might have been left out?</p>
<p><b>Planning Guidelines</b></p>	<p>(<i>for the driver</i>): Whilst you are programming or thinking about how to structure your code, try to be more verbal – for example, by muttering whilst you are typing. This tends to help the navigator to know that you are actively working, and have a clear sense of how you are approaching the task at hand. If you verbalise your thoughts, this will help the navigator make informed suggestions based on your current actions.</p>	<p>(<i>for the navigator</i>): Whilst the driver is programming, actively look to make suggestions that contribute to the code.</p>	<p>(<i>for the navigator</i>): If the driver is muttering, use this opportunity to make sure your suggestions have been properly understood.</p>		<p>(<i>for the driver</i>): When silent, it can look as if you are clicking randomly on the screen, which risks your navigator becoming bored and distracted. Voicing your thoughts can help counter this.</p>	<p>Learning to say <i>I don't know</i> or <i>I don't understand</i> is critical. Always explain things immediately – try to avoid replying to a question with <i>you'll see in a while</i>, as this will distract your partner.</p>	<p>(<i>for the navigator</i>): Think ahead, since you'll be driving in a short while: what is the current course of action not covering? Is there anything worth verifying that might have been left out?</p>
<p><b>Action Guidelines</b></p>	<p>(<i>for the driver</i>): When silent, it can look as if you are clicking randomly on the screen, which risks your navigator becoming bored and distracted. Voicing your thoughts can help counter this.</p>	<p>(<i>for the navigator</i>): When silent, it can look as if you are clicking randomly on the screen, which risks your navigator becoming bored and distracted. Voicing your thoughts can help counter this.</p>	<p>(<i>for the navigator</i>): When silent, it can look as if you are clicking randomly on the screen, which risks your navigator becoming bored and distracted. Voicing your thoughts can help counter this.</p>				