

Topic 1.1: Collaboration

Scenario — The TideTrack App Team

Original scenario for AP Computer Science Principles Topic 1.1. Not based on any real team or product.

Background

Four students at Bayside High are building TideTrack, a free app that shows local tide times and safe walking windows for a popular coastal trail. The team is Priya (strong at design), Marcus (the most experienced coder), Lin (who grew up walking the trail and knows it well), and Devon (who is new to coding but great at organizing the group).

The situation

Two weeks before the school showcase, the team meets to make decisions. Marcus has written most of the code so far, mostly on his own and late at night, and the others are not sure how it works. Priya has mocked up a clean design but Marcus thinks it will be slow to build. Lin keeps pointing out that the trail floods in spots the app does not warn about. Devon suggests they try pair programming for the last two weeks so the whole team understands the code, but Marcus worries it will slow him down.

What happens next?

The team has to decide how to finish the app and who does what. Tempers are a little short — everyone cares about the project, but they are working in different directions.

Application Questions

1. Explain how the team's mix of different strengths and backgrounds could make TideTrack a better app than any one of them could build alone. Use at least two specific team members as examples.

2. Explain why it is a risk that Marcus has written most of the code alone and the others do not understand it. Connect your answer to collaboration.

3. Describe how pair programming could help this team in the last two weeks. Name the two roles and explain what each person would do.

4. Determine which interpersonal skills the team most needs right now to settle their disagreements, and give one concrete example of how they would use one of those skills in this situation.