Writing & Debugging Code for New Software Features

Part 1: Office Roleplay Dialogue

Scenario: A Software Developer, Daisuke, is collaborating with his colleague, Min-Ji, on writing and debugging new features for a software application.

Min-Ji: Hey Daisuke, how's the new feature implementation going?

Daisuke: It's coming along, but I ran into a few issues with the **code**. I was testing a new function, but it keeps crashing.

Min-Ji: Hmm. Have you checked if there's a **syntax** error? Even a missing semicolon or incorrect indentation can break the program.

Daisuke: That's what I thought at first, but I reviewed the syntax and it looks fine. Now I'm **debugging** to see if the logic is incorrect.

Min-Ji: That makes sense. Did you run it step by step in the **IDE (Integrated Development Environment)**? Some IDEs have built-in debuggers that help track where the issue is.

Daisuke: Yeah, I'm using the debugging tool to see where the execution stops. It looks like a variable isn't updating properly.

Min-Ji: That could be affecting the **functionality** of the whole feature. Maybe there's a missing condition in the logic?

Daisuke: Good point! I'll add a few print statements to check the variable's value before and after the function runs.

Min-Ji: Sounds like a plan. Let me know if you need a second pair of eyes. Sometimes, a fresh perspective helps with debugging.

Daisuke: Thanks, Min-Ji! I'll try this approach and get back to you.

Part 2: Comprehension Questions

1. What problem is Daisuke facing in his code?
(A) The software is running too slowly
(B) The code is crashing and he is debugging it ✅
(C) He forgot to save his changes
(D) He needs to install a new IDE

2. What did Min-Ji suggest checking first?
(A) Whether the syntax is correct ✅
(B) Whether the computer is overheating
(C) If the software license is expired
(D) If the user interface design is complete

3. What is an IDE used for?
(A) To analyze software security risks
(B) To improve Wi-Fi signal strength
(C) To write, edit, and debug code ✅
(D) To manage customer service requests

4. Why did Daisuke decide to add print statements to his code?
(A) To delete unnecessary files from the system
(B) To increase the speed of the application
(C) To create a backup of the code
(D) To check the value of a variable while debugging ✅

Part 3: Key Vocabulary Definitions in Japanese

1. **Code (コード)** – ソフトウェアやアプリケーションを動作させるために書かれたプログラムの命令。

2. **Syntax (構文)** – プログラミング言語の文法ルールで、正しく書かないとエラーが発生する。

3. **Debugging (デバッグ)** – ソフトウェアのエラーを発見し、修正するプロセス。

4. **Functionality (機能性)** – ソフトウェアやプログラムがどのように動作するか、または提供する機能。

5. **IDE (Integrated Development Environment) (統合開発環境)** – コードの編集、実行、デバッグを行うための開発ツール。

Part 4: Questions & Correct Answers

1. **What problem is Daisuke facing in his code?**
   ✅ (B) The code is crashing and he is debugging it

2. **What did Min-Ji suggest checking first?**
   ✅ (A) Whether the syntax is correct

3. **What is an IDE used for?**
   ✅ (C) To write, edit, and debug code

4. **Why did Daisuke decide to add print statements to his code?**
   ✅ (D) To check the value of a variable while debugging