#### coursera

# Crashing Programs

 $\textcircled{\ }$  **1h 17m** of videos left  $\textcircled{\ }$  **20 min** of readings left  $\textcircled{\ }$  **1** graded assessment left

In this module, you'll get introduced to the age old question, "Why has my program crashed?" You'll learn how to troubleshoot system crashes and application crashes, what tools can be used to help identify the cause of the crash, and what log files to look at in order to find what might have gone wrong. Next, you'll dive into investigating why code crashes, and what you can do to prevent that from happening. Then, you'll explore what happens when an unhandled error occurs and throws an exception. You'll learn about the printf debugging technique, which will help you identify these errors and exceptions. Finally, you'll explore the concept of handling crashes and incidents at a much larger scale. You'll delve into a scenario where a large eCommerce site will throw an error 20% of the time. Once that issue has been fixed, you'll understand the importance of communication and documentation during these incidents, and how writing a post mortem can prevent issues from happening again.

### **Learning Objectives**

- Understand the difference between system and application crashes
- Utilize skills in debugging and log reading to identify these crashes
- Understand the different types of code crashes and be able to address invalid memory errors
- Utilize techniques, like printf debugging, to troubleshoot and resolve unhandled errors and exceptions
- Understand how communication and documentation during an outage or error is critical
- Understand what a postmortem is and what should be included in one

#### Hide Learning Objectives

## Why Programs Crash

- Intro to Module 3: Crashing Programs
  Video 3 min
- Discussion Prompt
  Discussion Prompt 10 min