PixelCloud Recovery Protocol

Estimated time: 30 minutes
Goal: Understand the concept of serialization, buffering, file I/O basics, closing streams and java libraries through explaining the concept to one another.

Background Story

Congratulations on successfully defending your survival camp in the dangerous valley and staying alive. After days of holding off infected creatures, a rescue team has finally arrived! Plot twist: they aren't from the Realm of Enchantments but rather from a tech company, named PixelCloud, from another universe that's been tracking portal anomalies.

The good news is they can finally help you get back home but the bad news is their rescue system is currently completely broken. This dimensional portal technology relies on a complex file management system (just because) to safely transport survivors back home, and it's failing everywhere.

To add more drama, the lead engineer just got dragged away by an infected creature. Before disappearing, they shouted loudly: "*DOCUMENTATION....FIVE CRITICAL SYSTEMS...FIX THEM IF YOU WANNA GO HOMMEeeeeee........*" (Wonder why nobody tried to save him but anyways)

You and your fellow survivors have been split into five emergency repair teams. Each team must immediately create a Recovery Protocol Guide for ONE broken system. If even ONE guide is incomplete, the portal won't stabilize and NOBODY goes home.

The infected creatures will breach the camp in 30 minutes.

Can your team document the fix in time?

Your Mission

Each team creates a **one-page emergency protocol** for other survivor-engineers to fix their part of the portal system. Think of it as a field manual that works even when you're exhausted, scared, and have no cell signal.

Materials
In-person: (large) paper, sticky notes, markers, pens
Online: Miro, powerpoint, canva

Room setup
In-person: different stations around the perimeter
Virtual: different breakout rooms
The number of stations and breakout rooms depend on the students present.

The Challenge

Phase 1: Document Your System (20 mins)

The rescue portal has FIVE critical systems. Your team is assigned ONE. Create a protocol guide based on the assigned system and ensure your guide meets all the requirements. Each team can randomly draw one critical system. For online teams, different systems will be automatically assigned to each breakout room.

Phase 2: Emergency Briefing (10 mins)

2 members stay as "System Specialists" (experts who brief others)
Others will **spend around 1 minute per station** as "Cross-Training Survivors" (need to understand backup systems)

System Specialists brief, for example:

"This system controls..."
"Here's what breaks if we mess up..."
"The fix requires..."

Cross-Training Survivors can ask, for example:

"What if creatures attack mid-process?"
"Can you explain that diagram again?"
"When exactly do we activate this?"