**Project Name:** StreamingOS: Low Cost Education System

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**Abstract (max 200 words):**

As technology improves in the 21st century, using mobile devices for educational purposes is becoming more common in primary and secondary schools. In addition to the cost, this technology becomes quickly outdated and needs to be replaced, forcing schools to spend continuous amounts of money on maintenance. StreamingOS is a system that provides students and teachers with inexpensive thin endpoint devices, with the resource-heavy OS being streamed to these devices from a backend server using container virtualization. The objective of this project is to design a powerful, inexpensive device and streaming system that enhances the learning experience. StreamingOS uses an inexpensive endpoint device and container virtualization to visually render and stream the execution of applications from a server or the teacher’s computer to these devices used by the students. The system design leverages concepts learned in distributed computing, operating systems, database theory, and networking courses. The advantage of this design over current alternatives is that it is scalable while enabling the teacher full control of what software each student views. The inexpensive hardware helps break down the barrier of the lack of technology in school settings and empowers teachers to incorporate more modern-day means of learning in their classrooms.

**Shortened Abstract (max 85 words):**

Technology in education is becoming increasingly common in today’s world. However, due to increasingly high costs, it is not readily available to everyone. StreamingOS is a system that aims to reduce these costs by providing students and teachers with inexpensive thin endpoint devices such as a Raspberry Pi or a tablet which streams resource-intensive applications from virtualized containers running on a backend server. The advantage of this system is cost effectiveness and a better teacher-student interaction capability for a wholistic learning environment.