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**StreamingOS/iStream/uStream/Streamify/Streamizza/Streamiva/Streamico/Streamical/Streamonic/**

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Studies have shown that students from schools in lower-income neighborhoods often have limited or no access to technological tools such as laptops, tablets or the internet. This means that these students are at a disadvantage and will have less opportunity to communicate using email, participate in collaborative online class projects, conduct internet research for school assignments and develop computer skills than students in middle and high-income schools. The objective of this project is to design a low-cost device that these students can use to enhance their in-class learning experience. StreamingOS uses a Raspberry Pi Zero and container virtualization to visually render and stream applications from the teacher’s laptop to these cheap hardware devices used by the students and vice versa. The design leverages the power of distributed computing, operating systems and database theory. The main advantage of this design over current alternatives is that it is scalable and gives the teacher full control of what application each student views and can access using a simple web application. Since the hardware is cheap, it can be easily replaced in case of damage (which is very likely in a school setting).

**Vidit Suggestion:**

**StreamingOS: Low Cost Education System**

Within the modern day, studies show that students from schools in lower-income families have limited or no access to technological tools such as cellphones, tablets, or laptops. This implies that those students are at a major disadvantage and have less opportunities to collaborate outside a classroom environment, conduct online research for school assignments/general learning, and develop meaningful computer skills for the industry compared to students from middle and high-income families. The objective of this project is to design a low-cost (yet powerful) device and system that enhances the learning experience. StreamingOS uses a cheap Raspberry Pi (or alternative) and container virtualization to visually render and stream applications from a server or the teacher’s laptop to these cheap devices used by the students. The system design leverages distributed computing, operating systems, database theory, and networking fundamentals. 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 and can access using a simple application. Due to the cheap hardware, it breaks 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.

**Final Abstract**

**StreamingOS: Low Cost Education System**

In today’s world, studies show that students from schools in lower-income families have limited or no access to technological tools such as cellphones, tablets, or laptops. This implies that those students are at a major disadvantage and have fewer opportunities to collaborate outside a classroom environment, conduct online research for school assignments/general learning, and develop meaningful computer skills for the industry compared to students from middle and high-income families. The objective of this project is to design a low-cost (yet powerful) device and system that enhances the learning experience. StreamingOS uses an inexpensive Raspberry Pi (or alternative) and container virtualization to visually render and stream 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. Due to the inexpensive hardware, it breaks 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.