Abstract

**SDGs Coverd: 4.Quality Education**
**9.Industry, Innovation, and Infrastructure**

**Problem Statement: At present,many softwares don’t work on low end hardware and low bandwidth situations**

So far, many software solutions are not able to function effectively in CUM-end hardware and low-tape width conditions, especially in rural and understanding areas. This creates a digital division, which limits the essential equipment, educational resources and opportunities for millions of people. Adapted software deficiency improves inequalities, prevents progress towards global goals such as SDG 4: Quality training and SDG 9: Industry, innovation and infrastructure.

Central challenges:
Hardware restrictions:

Low end devices often have limited processor power, RAM and storage, making it difficult to run modern software.

Many applications are designed for high devices, leaving low end users without viable options.

Bandwidth obstacles:

Rural and remote areas often suffer from poor internet connection, with slow speed and high delay.

Data-havi apps (eg video streaming, cloud-based tools) are useless in such an environment.

Software Blot:

Many modern applications are resource intensive, which has a large installation size and the use of high memory.

This makes them unsuitable for low-end hardware and low-band width scenarios.

Lack of offline functionality:

Most software depends on continuous internet connection, which is not possible in areas with incredible or expensive internet access.

User experience:

Complex interfaces and heavy animations can overwhelm users with limited technical reading skills or old devices.

Problem effect:
Educational obstacles: Students in rural areas cannot reach online teaching platforms, harass education and skills development.

Economic inequality: Access limited to digital units prevents individuals from participating in the digital economy or improving the livelihood.