

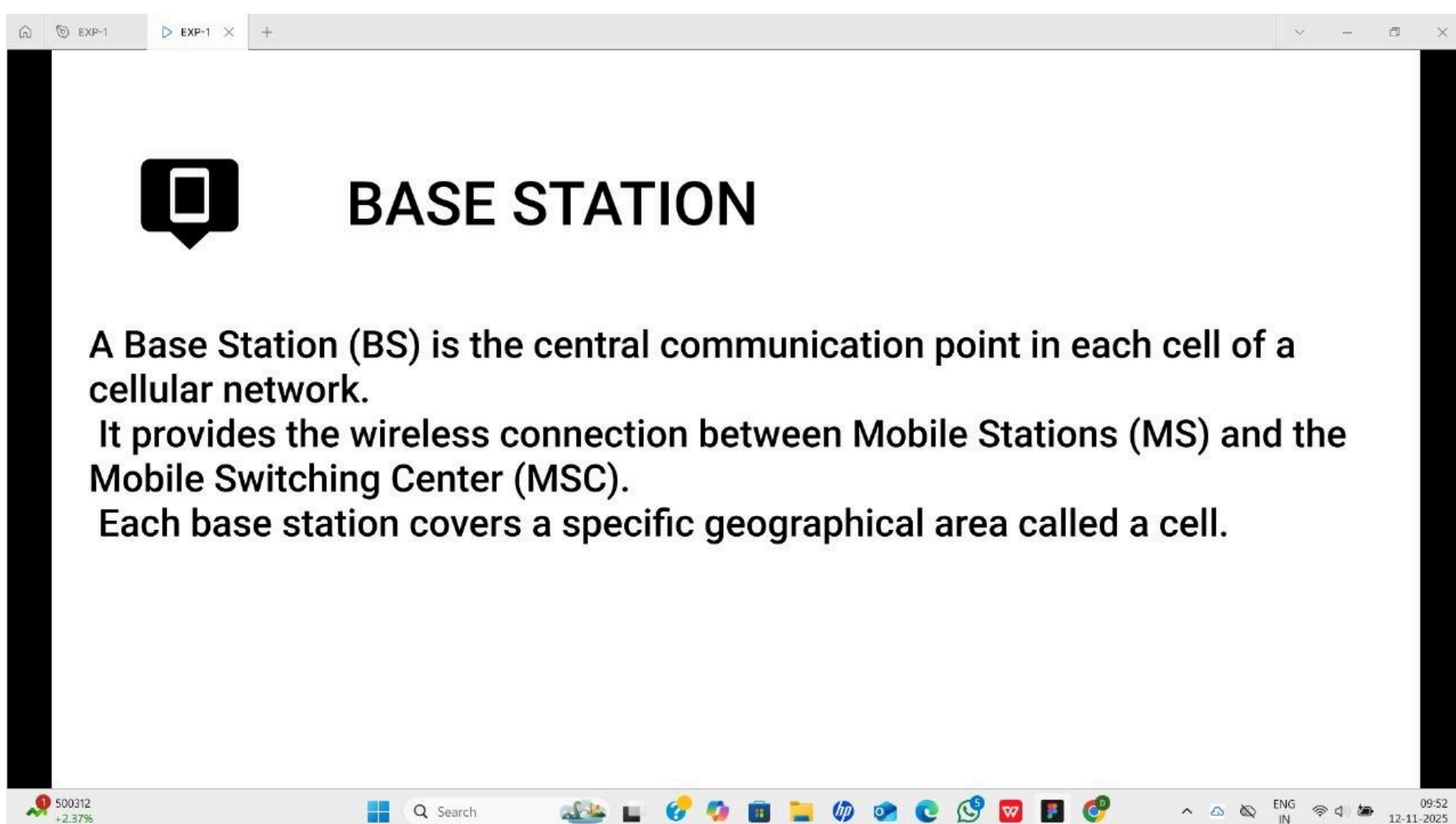
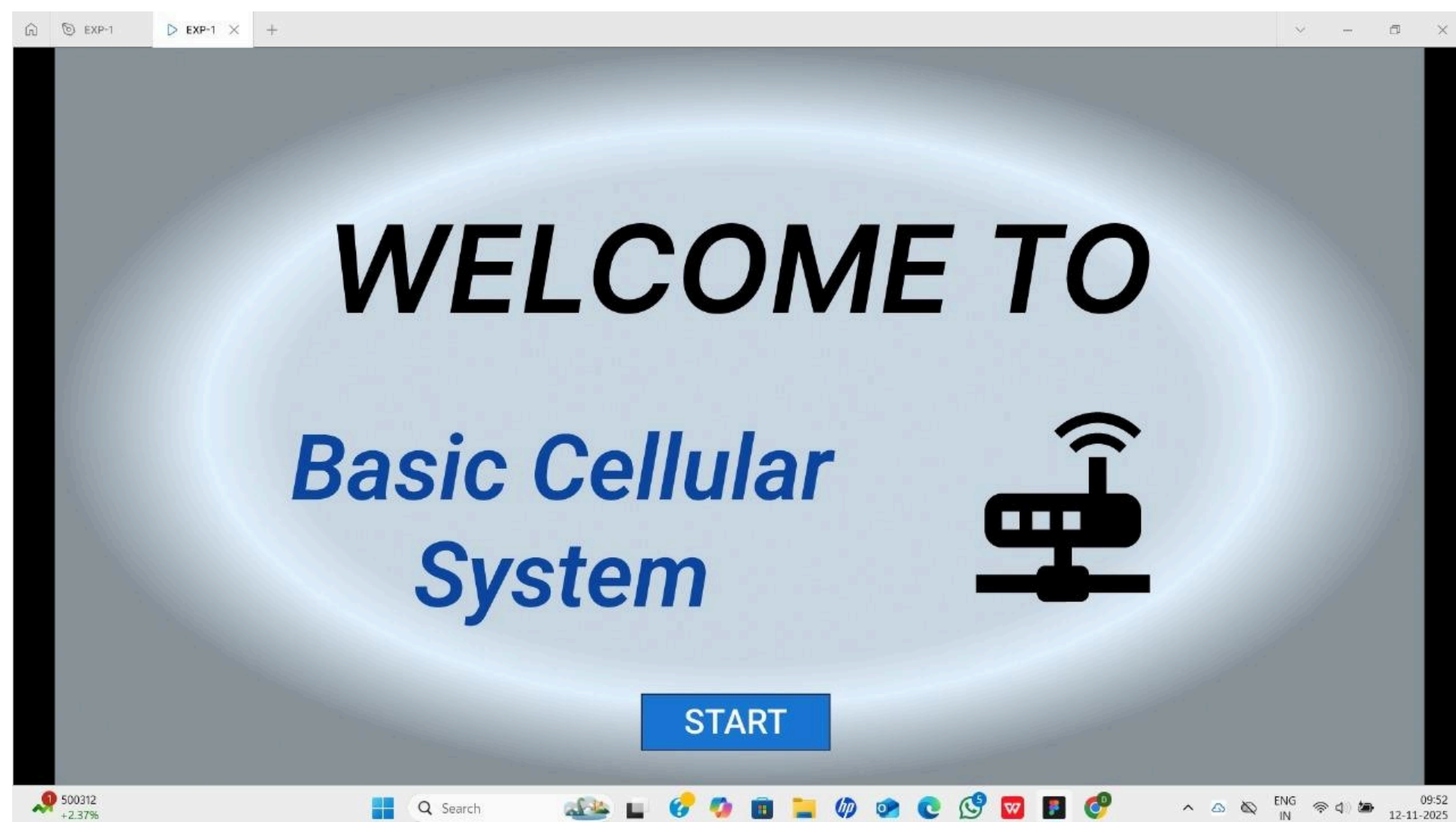


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Q: BASIC CELLULAR SYSTEM



EXP-1

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BASIC CELLULAR SYSTEM

A basic cellular system is a network architecture used in mobile communication systems that divides a geographic area into smaller regions called cells. Each cell is served by its own Base Station (BS), which communicates with Mobile Stations (MS) (like smartphones) using radio frequencies.

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graph LR; MS[MOBILE STATION] <--> BS[BASE STATION]; BS <--> MSC[MSC]
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The diagram illustrates the basic components of a cellular system. It shows three main components in boxes: 'MOBILE STATION' (with a smartphone icon), 'BASE STATION' (with an antenna icon), and 'MSC' (with a person icon). Bidirectional arrows connect the Mobile Station to the Base Station, and the Base Station to the MSC, indicating two-way communication.

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MOBILE STATION

Main Components:

1. Mobile Equipment (ME):
 - The actual hardware (like a smartphone or tablet).
 - Handles voice calls, SMS, data transmission, and radio signal processing.
2. Subscriber Identity Module (SIM):
 - A small chip that stores the user's unique International Mobile Subscriber Identity (IMSI) and authentication key.
 - Identifies and authenticates the user to the network.
3. Software/Operating System:
 - Manages user interfaces, applications, and communication protocols.
 - Ensures coordination between hardware and the network.

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