



LESSON PLAN

Arduino Uno Q Local AI Agent

ZONE: Software Zone

AGE GROUP: 15-18

MATERIALS: Laptops/Internet/Arduino Uno Q

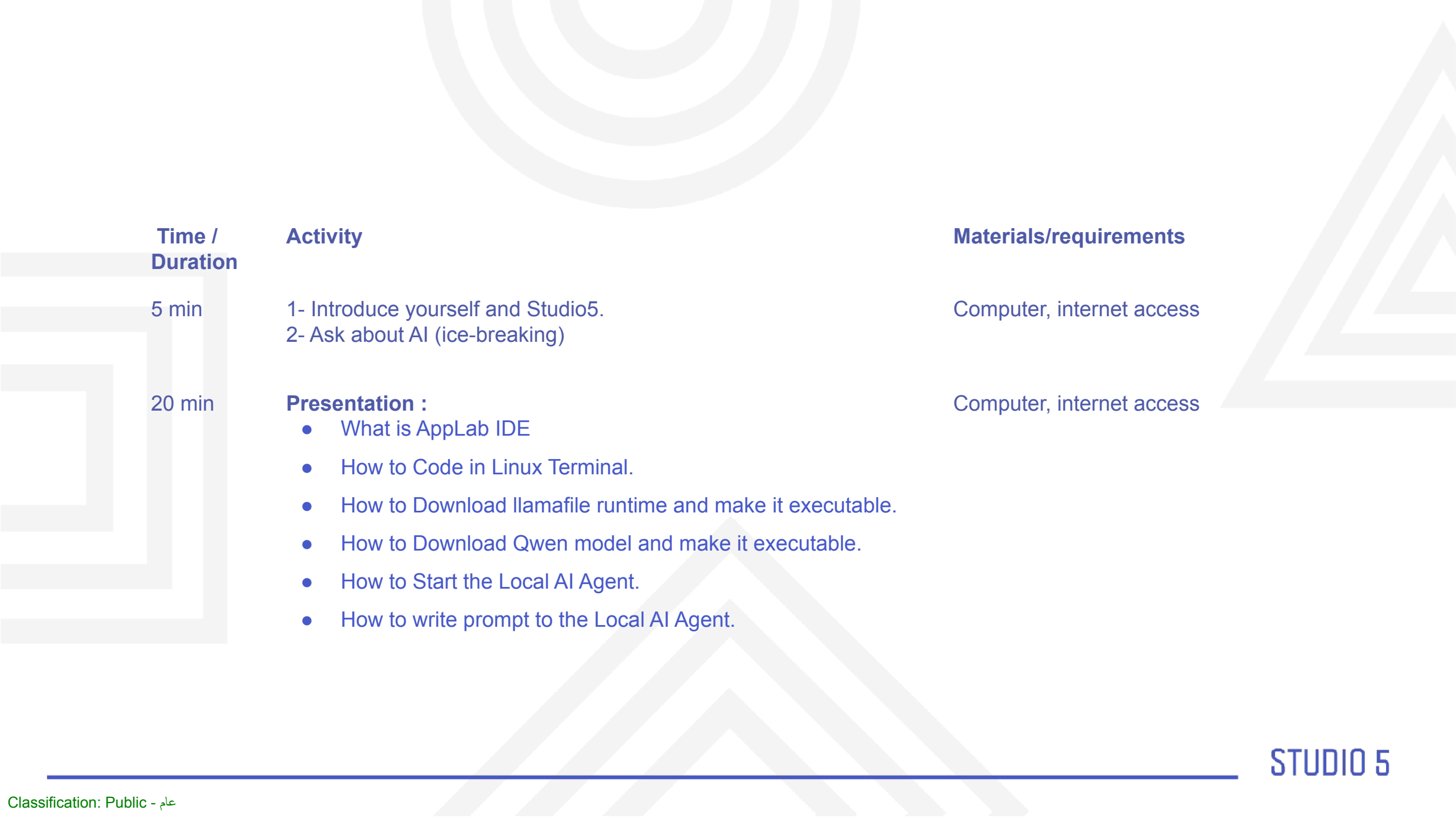
DESCRIPTION: This workshop aims to teach participants basic coding and its fundamentals, using Python and Arduino, going from knowing the board, to create a fully working local AI Agent on a portable and limited resources device with huge capabilities. In addition, participants will have an “Open-Eye” on many different new technology that implements multiple hybrid systems.

ENGINEERING DESIGN CHALLENGE:

LEARNING OBJECTIVES:

After attending this session, participants will gain:

- What is AppLab IDE
- How to Code in Linux Terminal.
- How to Download Llamafire runtime and make it executable.
- How to Download Qwen model and make it executable.
- How to Start the Local AI Agent.
- How to write prompt to the Local AI Agent.



Time / Duration	Activity	Materials/requirements
5 min	1- Introduce yourself and Studio5. 2- Ask about AI (ice-breaking)	Computer, internet access
20 min	Presentation : • What is AppLab IDE • How to Code in Linux Terminal. • How to Download llmfile runtime and make it executable. • How to Download Qwen model and make it executable. • How to Start the Local AI Agent. • How to write prompt to the Local AI Agent.	Computer, internet access

Time / Duration

45 min

Activity

Hands on : (Step by Step)

1. Use AppLab IDE
2. Prepare the Uno Q board.
3. Code in Linux Terminal for directories management
4. Download llamafire runtime and make it executable.
5. Download Qwen model and make it executable.
6. Start the Local AI Agent.
7. write prompt to the Local AI Agent.

Materials/requirements

Computer, internet access.

45 min

Help the participants to do the whole process from connection to coding

Computer, internet access.



Consideration

1. We need to consider participants has multiple knowledge levels
2. We need to make sure all participants will do the setup/configuration correctly

Materials/requirements



THANK YOU