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(54) Title of the invention : A ROBOTIC TEACHING ASSISTANT DEVICE FOR PROGRAMMING LABS

<p>(51) International classification :G06F0003160000, G10L0015220000, H04W0004800000, G09G0003323300, G10L0015260000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY Address of Applicant :19, Knowledge Park-II, Institutional Area, Greater Noida – 201306, Uttar Pradesh, India. -----</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)NIDHI SHARMA Address of Applicant :Department of Electronics and Communication Engineering, Noida Institute of Engineering & Technology, Greater Noida. Greater Noida ----- -----</p>
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(57) Abstract :

A robotic teaching assistant device for programming labs is disclosed comprising a camera (102), voice interface (104), code processing screen (112), AI engine, and an interactive display (114). The device detects code syntax and logic errors, provides verbal and visual feedback, and supports multiple programming languages. The robotic unit utilizes OCR and NLP to assist students in real-time, enabling error correction, explanation, and guided learning without instructor dependence. This system improves programming efficiency, comprehension, and self-learning in laboratory environments.

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