



Assignment - 12.11.1.1

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I. PROBLEM

If a line makes angles $90^\circ, 135^\circ, 45^\circ$ with x,y and z-axis respectively. Find its direction cosines.

II. SOLUTION

let

$$\mathbf{A} = \begin{pmatrix} \cos 90^\circ \\ \cos 135^\circ \\ \cos 45^\circ \end{pmatrix} = \begin{pmatrix} 0 \\ -\frac{1}{\sqrt{2}} \\ \frac{1}{\sqrt{2}} \end{pmatrix} \quad (1)$$

Therefor, required direction cosines are $0, -\frac{1}{\sqrt{2}}, \frac{1}{\sqrt{2}}$

<https://github.com/sssurajit/fwc/blob/main/vectors/12.11.1.1/codes/code.py>

Execute the code by using the command
python3 code.py