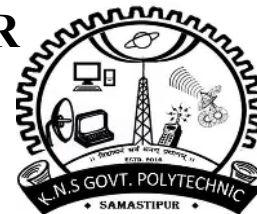




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EXPERIMENT - 1.1

AIM :- Install EDA software.

APPARATUS REQUIRED: -

S. No.	Apparatus / Software Required	Specification / Description
1	Computer / Laptop	Minimum 4 GB RAM, 64-bit operating system preferred
2	Operating System	Windows / Linux / macOS depending on tool support
3	EDA Software	Example: KiCad / Multisim / Proteus / OrCAD / LTspice / Xilinx Vivado
4	Internet Connection	Required for downloading installer and libraries
5	User Manual / Installation Guide	For installation and basic operation reference
6	Basic Electronic Components Library	Resistors, capacitors, diodes, transistors, ICs, logic gates, etc.
7	Power Supply Source	Virtual DC / AC source available inside the EDA tool
8	Simulation Models	Required for circuit simulation, if applicable

THEORY:-

EDA stands for **Electronic Design Automation**. EDA tools are software applications used by electronics engineers and students for designing, simulating, analyzing, and verifying electronic circuits and systems. These tools reduce manual effort and improve the accuracy, speed, and reliability of electronic design.

EDA software is widely used in areas such as analog circuit design, digital circuit design, PCB designing, VLSI design, FPGA design, and embedded system development. Instead of



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building a circuit physically at the first stage, the designer can create a virtual circuit using schematic capture and test its behavior through simulation.

An EDA tool generally provides multiple interfaces for different stages of design. These interfaces help users create circuit diagrams, perform simulations, design PCB layouts, check design rules, and generate output files for manufacturing.

Importance of EDA Tools:-

EDA tools are important because they allow engineers to:

- **Design circuits accurately** before hardware implementation.
- **Simulate circuit behavior** and identify faults at an early stage.
- **Reduce cost and time** in product development.
- **Create PCB layouts** suitable for fabrication.
- **Verify design rules** and reduce manufacturing errors.
- **Generate professional documentation** such as schematics, layouts, bill of materials, and output files.

PROCEDURE:-

Step 1: Downloading the EDA Software

1. Open a web browser (Google Chrome, Microsoft Edge or Firefox) on the computer system.





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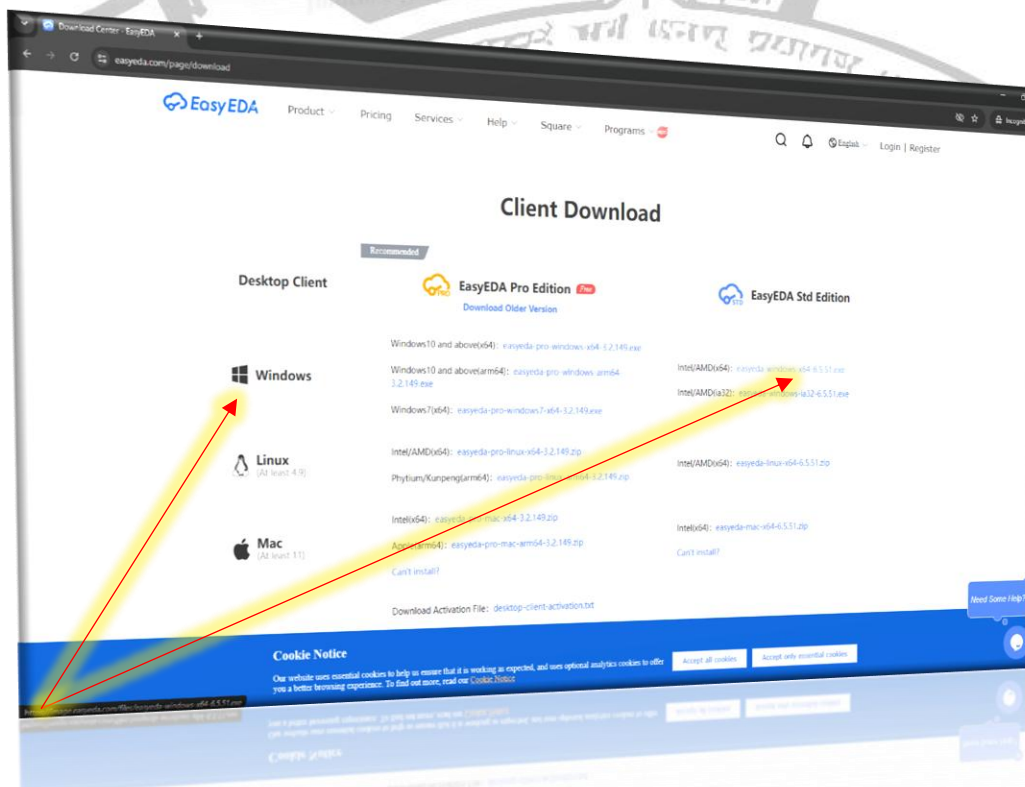
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2. Visit the official website (<https://easyeda.com/> & <https://easyeda.com/editor>) of the required EDA tool.



3. Select the correct version according to the operating system (Windows / Linux / macOS).





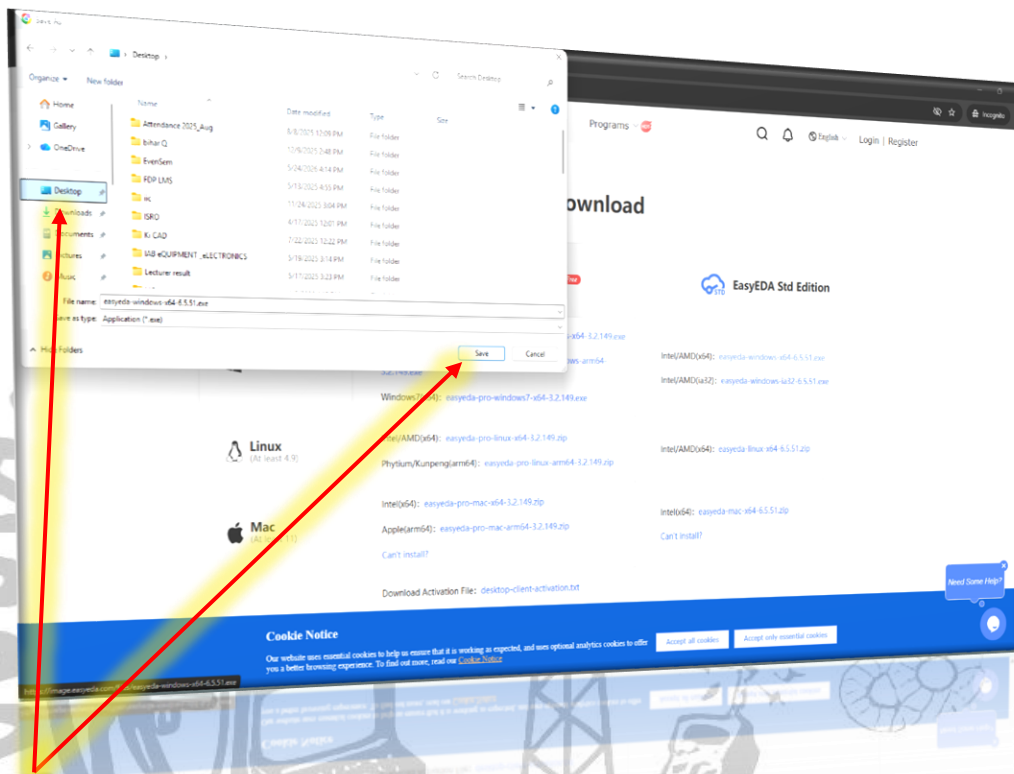
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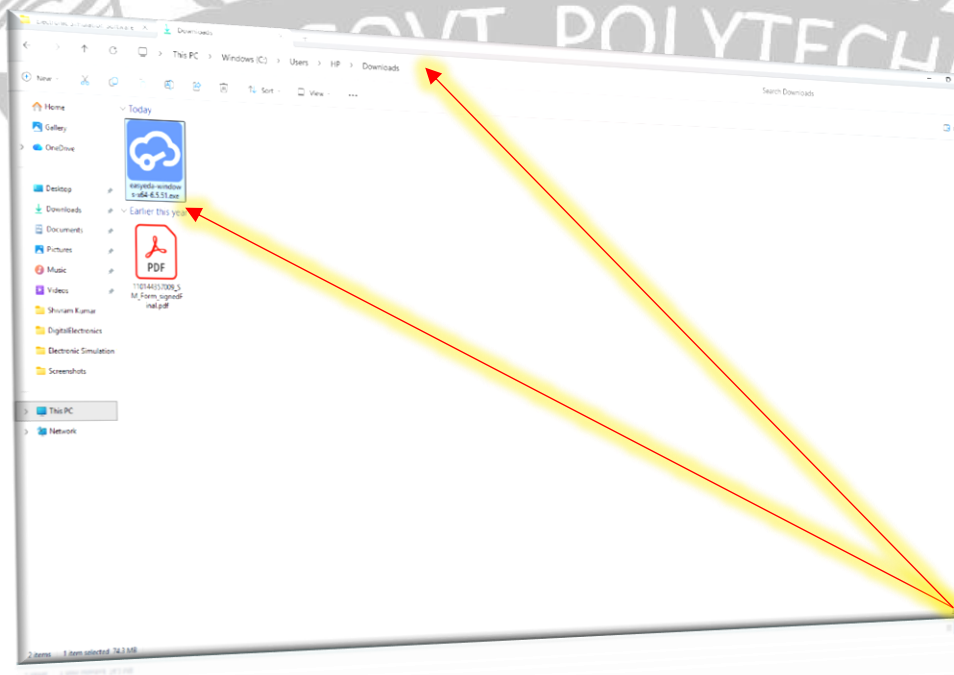


4. Download the installer file.
5. Save the installer in a suitable folder on the computer (Desktop) .



Step 2: Installing the EDA Software :-

1. Locate the downloaded installer file (Download or Desktop) .





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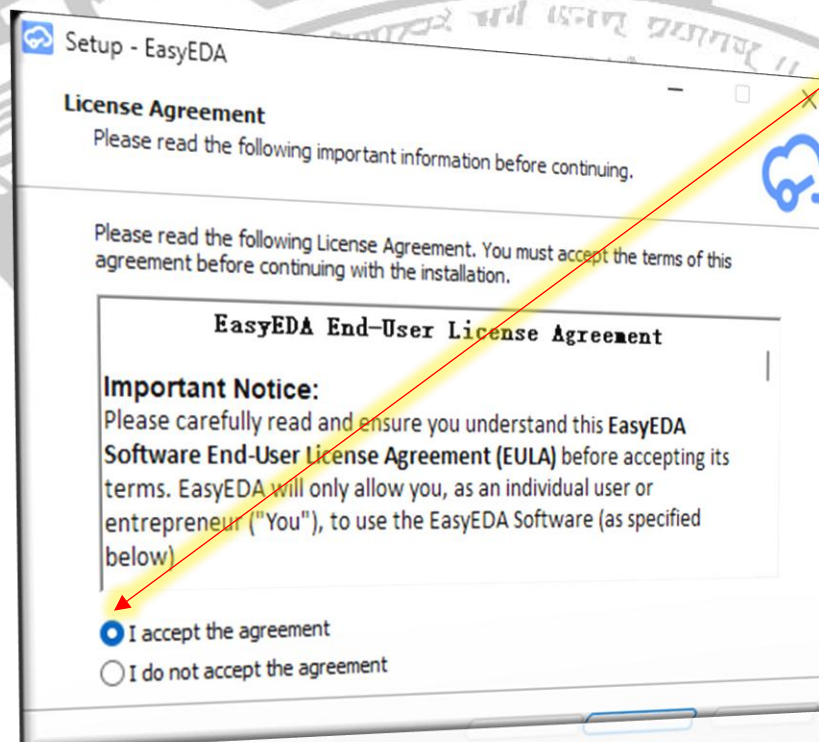
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2. Double-click the installer to start the installation process.



3. Accept the license agreement after reading the terms and conditions.





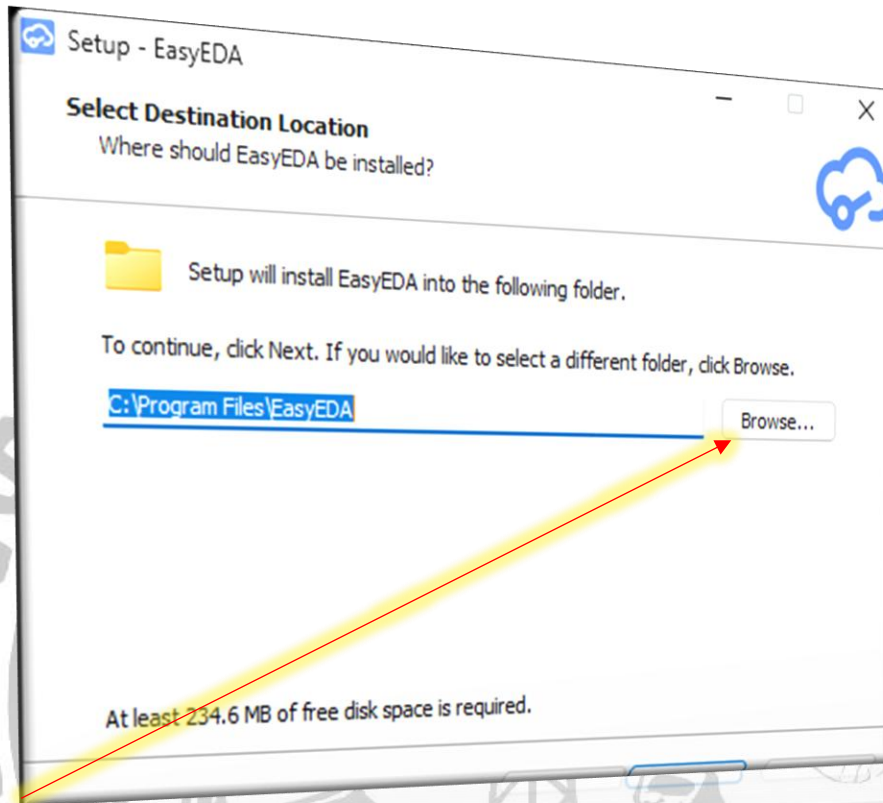
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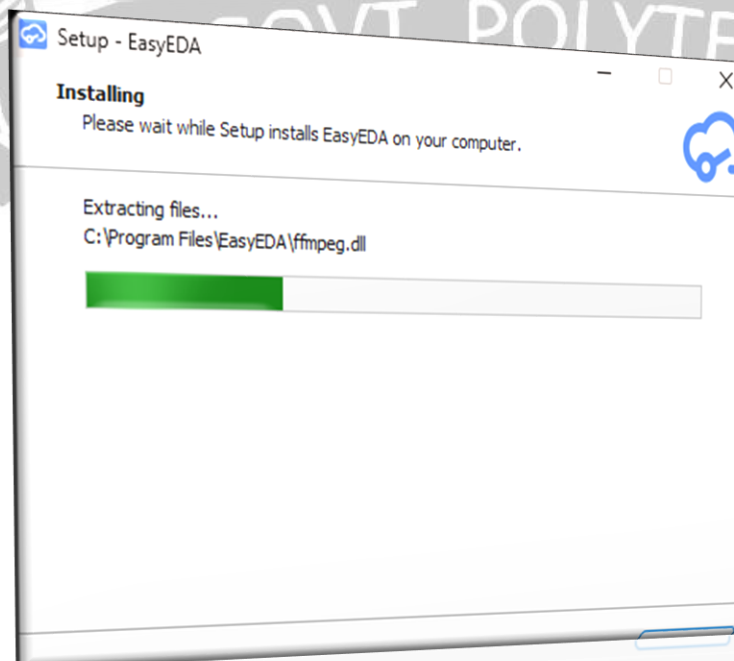
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4. Select the installation directory or keep the default path.



5. Choose the required components such as libraries, simulator, PCB editor, and documentation.
6. Click on the **Install** button.
7. Wait until the installation process is completed.





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8. Click **Finish** to close the installer.
9. Restart the computer if required.

PRECAUTIONS:-

1. Always download the EDA software from the official website.
2. Check system requirements before installing the software.
3. Install all required libraries and simulation models.
4. Save the project regularly to avoid data loss.
5. Use proper component values and correct power supply connections.
6. Ensure ground connection is added before simulation.
7. Verify component footprints before PCB layout design.
8. Run design rule check before finalizing the PCB.
9. Avoid overlapping components and incorrect track routing.
10. Keep backup copies of important project files.

RESULT:-

The given **EDA software** was **successfully installed** on the computer system.