Jaypee Public School, Noida
Computer Science and Emerging Technologies Curriculum
Class IX

COURSE OUTCOMES		COGNITIVE LEVELS
CO 9.1	Create and edit engaging video content by applying fundamental editing techniques such as trimming, sequencing, audio integration, and visual enhancements using Adobe Premiere Pro, culminating in the production of a short video project.	Evaluation Level (Level 6)
CO 9.2	Recall the syntax and basic components of HTML and CSS, such as block & inline elements, classes, and selectors.	Knowledge Level (Level 1)
CO 9.3	Apply the fundamentals of version control and collaboration using GitHub, and utilize GitHub Copilot to assist in code generation, problem-solving, and development tasks while understanding its advantages and limitations.	Application Level (Level 3)
CO 9.4	Design and develop responsive web pages using HTML, CSS, and basic JavaScript concepts, and create functional applications through AI-assisted development using Lovable.dev by applying principles of layout, styling, and app design.	Evaluation Level (Level 6)
CO 9.5	Analyze and utilize concepts of Generative AI (including its types, tools, benefits, and limitations) and apply AI platforms such as NotebookLM, Lobe AI, and PictoBlox to build simple AI models and projects like object detection.	Evaluation Level (Level 6)
CO 9.7	Explain how quantum computers manipulate qubits using gates.	Understanding Level (Level 2)

Module No.	Title of the Module	Topics in the Module	No. of Lectures for the module
1.	Multimedia Mastery – Animation and Video Editing	Introduction to video editing and its applications; overview of Adobe Premiere Pro and its interface; creating and managing projects; importing and organizing media files; understanding timeline and sequences; basic editing techniques (cut, trim, split); working with audio; adding transitions, titles, and basic video effects; exporting and sharing videos; mini project – creating a short video using learned editing skills.	12
2.	Exploring GitHub	What is GitHub?, Basics of Version Control, Creating a GitHub Account, Understanding Repositories (Repos), Files and Folders in GitHub, Collaboration in GitHub Simple Hands-on Activity	08

3.	GitHub Copilot Basics	Introduction to GitHub Copilot, How GitHub Copilot Works (Conceptual), Setting Up GitHub Copilot, Using GitHub Copilot, Types of Tasks Copilot Can Help With, Advantages of GitHub Copilot, Limitations and Precautions, Simple Hands-on Activities	10
4.	More in HTML and CSS	HTML - Block & Inline Elements, Div Element, Classes, Id, IFrames, Javascript and Responsive Web Design. CSS - Syntax, Selectors, Ways to Insert CSS, Colors, Backgrounds, Flexboxes and Website Layout.	12
5.	Explore App Creation with Lovable.dev	Introduction to app development and types of apps; overview and setup of Lovable.dev; AI-assisted app creation; designing app ideas, features, and layouts; building and customizing apps with basic functionality and AI features; testing, debugging, and publishing; mini project – create a simple app (quiz/to-do/idea generator).	14
6.	Getting started with Roblox and Unity	Introduction to game development and types of games (2D/3D); overview of Roblox Studio and Unity; getting started with platforms and interface; creating simple games and scenes; basics of scripting and game objects; adding assets, interactions, and physics; testing, publishing, and sharing; mini project – design a simple game.	14
7.	Introduction to Database and MySQL Commands	Introduction, DBMS, RDMS, Basic Keys, Introduction to MYSQL, Database Commands: DDL & DML, and MYSQL Data Types. Create and Update Table/Database, applying/ removing constraints	10
8.	Introduction to Generative AI and Fun projects with Pictoblox	Introduction, Generative AI vs Conventional AI , Types of Generative AI, Examples of Generative AI, Benefits of using Generative AI, Limitations, GAN Paint, Generative AI tools. Fun projects in Pictoblox: Object Detection.	07
9.	Smart AI Tools for Learning and Creation	Introduction to AI Tools, Getting Started with NotebookLM, Practical Uses of NotebookLM, Introduction to Lobe AI, Building Models with Lobe AI	05
10.	More with eXtended Reality	Experience XR, XR Applications, XR for social good	04
11.	Quantum Computing	What are quantum gates? Explain using simple quantum gates (X, H). How these gates change the state of qubits. Introduction to quantum algorithms (very high-level, like how they differ from classical algorithms).	04
Technology Tools Learnt		HTML, My SQL, Pictoblox, Lobe AI, GitHub Copilot, Adobe Premiere Pro, Roblox, Unity	

Project based learning: Each student in a group of 3-4 will study a practical problem in social network analysis with its real-world applications.

Total classes-84