**Unit 10 OOP Application of Principles and Concepts**

OOPs stands for [Object-Oriented Programming](https://www.geeksforgeeks.org/object-oriented-programming-in-cpp/). It is about creating objects that contain both data and functions. Object-Oriented programming has several advantages over procedural languages. As OOP is faster and easier to execute it becomes more powerful than procedural languages like [C++](https://www.geeksforgeeks.org/c-plus-plus/). OOPs is the most important and flexible paradigm of modern programming. It is specifically useful in modeling real-world problems. Below are some applications of OOPs:

* Real-Time System design: Real-time system inherits complexities and makes it difficult to build them. OOP techniques make it easier to handle those complexities.
* Hypertext and Hypermedia: Hypertext is similar to regular text as it can be stored, searched, and edited easily. Hypermedia on the other hand is a superset of hypertext. OOP also helps in laying the framework for hypertext and hypermedia.
* AI Expert System: These are computer application that is developed to solve complex problems which are far beyond the human brain. OOP helps to develop such an AI expert System
* Office automation System: These include formal as well as informal electronic systems that primarily concerned with information sharing and communication to and from people inside and outside the organization. OOP also help in making office automation principle.
* Neural networking and parallel programming: It addresses the problem of prediction and approximation of complex-time varying systems. OOP simplifies the entire process by simplifying the approximation and prediction ability of the network.
* Stimulation and modeling system: It is difficult to model complex systems due to varying specifications of variables. Stimulating complex systems require modeling and understanding interaction explicitly. OOP provides an appropriate approach for simplifying these complex models.
* Object-oriented database: The databases try to maintain a direct correspondence between the real world and database object in order to let the object retain it identity and integrity.
* Client-server system: Object-oriented client-server system provides the IT infrastructure creating object-oriented server internet(OCSI) applications.
* CIM/CAD/CAM systems: OOP can also be used in manufacturing and designing applications as it allows people to reduce the efforts involved. For instance, it can be used while designing blueprints and flowcharts. So it makes it possible to produce these flowcharts and blueprint accurately.

OOP can also be used in manufacturing and design applications, as it allows people to reduce the effort involved. For instance, it can be used while designing blueprints and flowcharts. OOP makes it possible for the designers and engineers to produce these flowcharts and blueprints accurately