

IT- 701 – Object Oriented Analysis and Design

Unit I: Overview of Object Oriented concepts: Objects and classes, abstraction, generalization and inheritance, encapsulation, multiple inheritance, aggregation abstraction classes, polymorphism, link and association, Need for object oriented approach

Unit II: System design life cycle, object oriented S/W development process model, Object Oriented Analysis, Object Modeling Technique (OMT): object model, function model, relationship among models, object diagrams, state diagrams, data flow diagrams, analysis.

Unit III: Object oriented Design: Overview of object design, Combination the models, Designing algorithms, design optimization, Implementation of control, Adjustment, Design of association, object representation, physical packaging, documenting design decision, comparison of use-case driven approach.

Unit IV: Translation Object Oriented design into implementation, Programming style, Documentation, characterization of object oriented languages, Comparison of object oriented language like C++, JAVA, object programming.

Unit V: Unified Modeling Language (UML): Class diagram sequence diagram Use case diagram, Collaboration, diagram, state, chart diagram, Activity diagram, component diagram, deployment diagram, Object oriented Database: Relational Vs .object oriented database, the architecture of object oriented database, query language for Object Oriented database.

References:-

- Satzinger, Jackson and Burd, “Object oriented Analysis and design with the Unified Process”, CENGAGE Learning.
- Michael Blaha and J. Rumbaugh, “Object oriented Modeling and design with UML”, Pearson Education
- O’Docherty, “Object Oriented Analysis and Design Understanding, System Development with UML2.0”, Wiley India.

List of Experiment:-

- Draw Object, state, Data flow Diagram of ATM.
- Draw Object, state, Data flow Diagram of Telephone Call.
- Draw Object, state, Data flow Diagram of Library Information System.
- Draw Object, state, Data flow Diagram of Airline reservation System.
- Draw Object, state, Data flow Diagram of Calculator.
- Draw Object, state, Data flow Diagram of College Management system.
- Draw Object, state, Data flow Diagram of Payroll System.
- Draw Object, state, Data flow Diagram of Railway Reservation system.
- Draw Object, state, Data flow Diagram of Online Sales.
- Draw Object, state, Data flow Diagram of Examination result display System of a University.