**ASPIRE SYSTEM – JAVA**

**DAY 2 BATCH-2**

ABSTRACTION:

* Features of Oops
* Hide the implementation details to the user and shows functionality of the programming to the user
* High security
* abstract class and interface can be used to achieve abstraction
* We can perform any change to the internal system without affecting the outside person.
* Enhancement will be easy
* Eg : car
* If we applied the break, we don’t know the actual function inside the car

ENCAPSULATION:

* Binding data and corresponding methods together into a single unit
* Data hiding- by declaring data members as private
* Security
* Control over the data- change the value
* Disadvantage
* Length of code will be increased, so execution will slow down

encapsulation = data hiding + abstraction

INHERITANCE:

* Object acquire all the properties and behaviours of parent class
* Method overriding
* Runtime polymorphism can be achieved
* Code reusability
* Terms:
* Class- group of object with common properties
* Subclass/child class- inherits from other class
* Superclass/parent class- where the subclass inherits the feature

TYPES:

* By class
* Single
* Multilevel
* Hierarchical
* By interface
* Multiple
* Hybrid

SINGLE:

* When a class inherits another class
* Eg : Dog class inherits the Animal class

MULTILEVEL:

* Chain of inheritance
* Eg : Baby Dog class inherits the Dog class which again inherits the Animal class

HIERARCHICAL:

* When two or more classes inherits a single class
* Eg : Dog and Cat classes inherits the Animal class

HYBRID:

* Combination of single and multiple
* Not support in java, this can achieved using interfaces

MULTIPLE:

* creating a single class with multiple super classes
* Eg: newly born baby inherits eyes from mother and nose from father