Lesson 17: Base Object-Oriented Programming

1. Object-Oriented Programming is a paradigm that provides many concepts, such as inheritance, data binding, polymorphism, etc. It is a methodology or paradigm to design a program using classes and objects.

2. A class is a blueprint for the object.

3. Create a class in Java

class ClassName {
// fields
// methods
}
	class Bicycle {
	// state or field
	private int gear = 5;
	// behavior or method
	public void braking () {
	System.out.println("Working of Braking");
	}
	}

   - Fields are used to store data
   - methods are used to perform some operations

4. An object is any entity that has a state and behavior. It is called an instance of a class. For example, suppose Bicycle is a class then MountainBicycle, SportsBicycle, TouringBicycle, etc can be considered as objects of the class. We have used the new keyword along with the constructor of the class to create an object.

```
className object = new className();
// for Bicycle class
Bicycle sportsBicycle = new Bicycle();
Bicycle touringBicycle = new Bicycle();
```

5. Access Members of a Class

class Bicycle {
// field of class
int gear = 5;
// method of class
void braking() {
}
}
Bicycle sportsBicycle = new Bicycle();
// access field and method
sportsBicycle.gear;
sportsBicycle.braking();
	sportsBicycle.gear - access the field gear
	
	sportsBicycle.braking() - access the method braking()