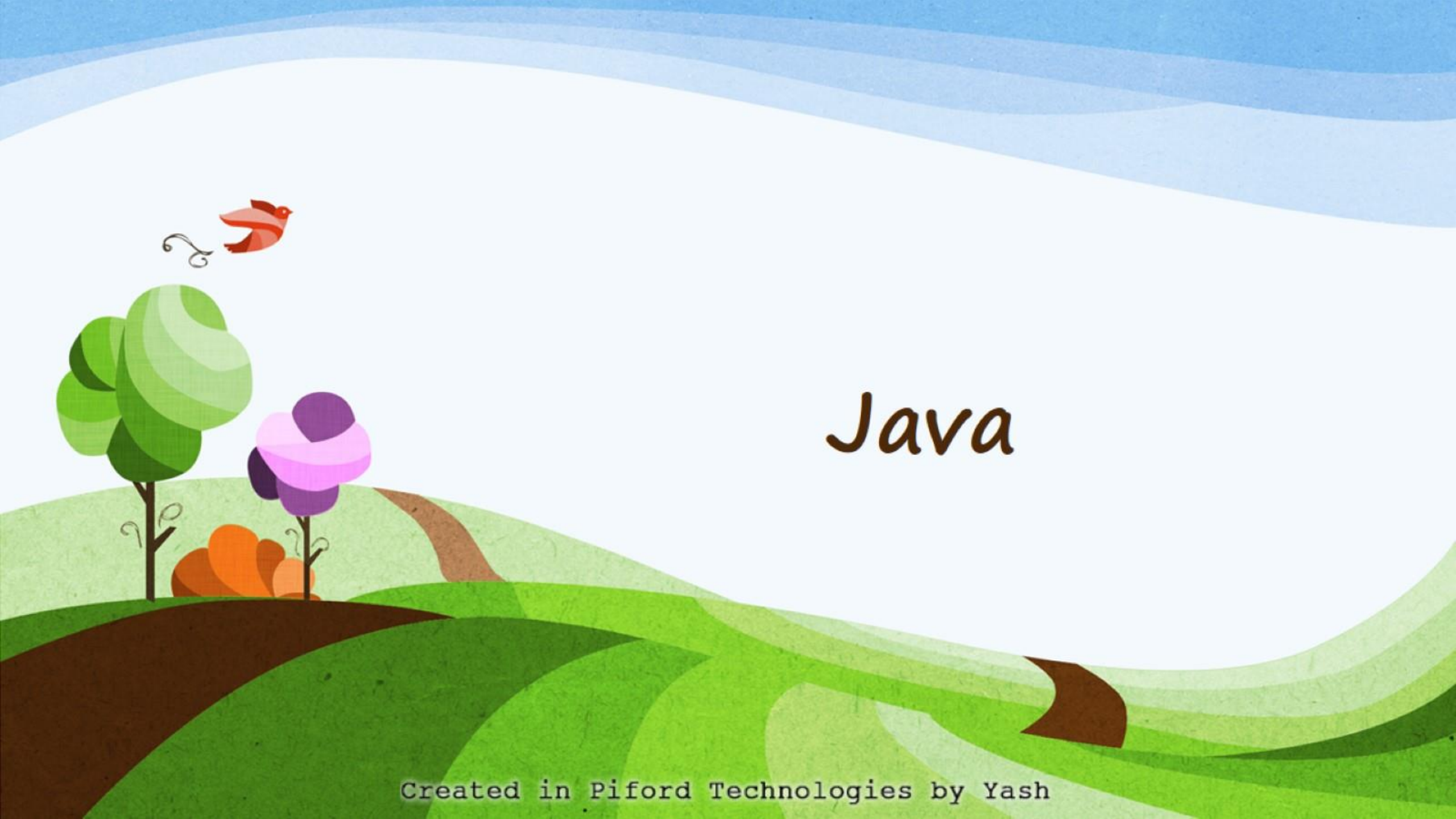
Java
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Abstraction

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Abstraction

- Abstraction is a process of hiding the implementation details and showing only functionality to the user.
- Another way, it shows only important things to the user and hides the internal details.
- E.g. : Applying break in a car, you just press brake paddle and car stops. You don't know the internal details about the brake mechanism.

Ways to achieve Abstraction

- Abstract class (0 to 100%)
- Interface (100%)

Abstract class

- A class that is declared as abstract is known as abstract class. It needs to be extended and its method implemented.

Example:

Hornet.java

```
1  package try5;
2
3  abstract class Honda{
4      abstract void show();
5  }
6
7  class Hornet extends Honda {
8      void show() {
9          System.out.println("Working");
10     }
11     public static void main(String[] args) {
12         Honda h = new Hornet();
13         h.show();
14     }
15 }
16
```

Interface

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Interface

- An interface is a reference type in Java.
- It is similar to class. It is a collection of abstract methods.
- Writing an interface is similar to writing a class. But a class describes the attributes and behaviors of an object. And an interface contains behaviors that a class implements.

Example:

Hornet.java

```
1  package try5;
2
3  interface Honda{
4      void show();
5  }
6
7  class Hornet implements Honda {
8      public void show() {
9          System.out.println("Working");
10     }
11     public static void main(String[] args) {
12         Honda h = new Hornet();
13         h.show();
14     }
15 }
16
```

Abstract class vs. Interface

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Abstract class vs. Interface

Abstract class	Interface
The abstract keyword is used to declare abstract class.	The interface keyword is used to declare interface.
Abstract class can have abstract and non-abstract methods.	Interface can have only abstract methods. Since Java 8, it can have default and static methods also.
Abstract class doesn't support multiple inheritance.	Interface supports multiple inheritance.
Abstract class can have final, non-final, static and non-static variables.	Interface has only static and final variables.