

## What is Java?

- A “programming language and computing platform” released in 1995 by Sun Microsystems
- Functions many applications throughout the world wide web to ensure websites satisfies its visitors by three different approaches.
  - 1: Servlets - Introduces an Application Programming Interface (API) that provides the bare necessities for programming web applications.
  - 2: JavaServer Faces (JSF) - A more advanced API with not as much freewill for the programmer.
  - 3: Frameworks - Code layouts are given to solve real world problems easily, like a “copy-and-paste” style.

## Basic Coding Example

```
import java.util.Scanner; //Permits data from the
                        //keyboard or files

public class BeerCheck { //Java RUNS on classes

    public static void main(String [ ] args) { //Main function

        int age; //An integer called age

        Scanner kbd = new Scanner(System.in);
        //Allows for keyboard input

        System.out.print("Enter your age: ");
        //Displays a prompt to the user

        age = kbd.nextInt( ); //Gets an integer from the user

        if(age >= 21) //Compares the value of age to 21
            System.out.print("You may have a beer!");

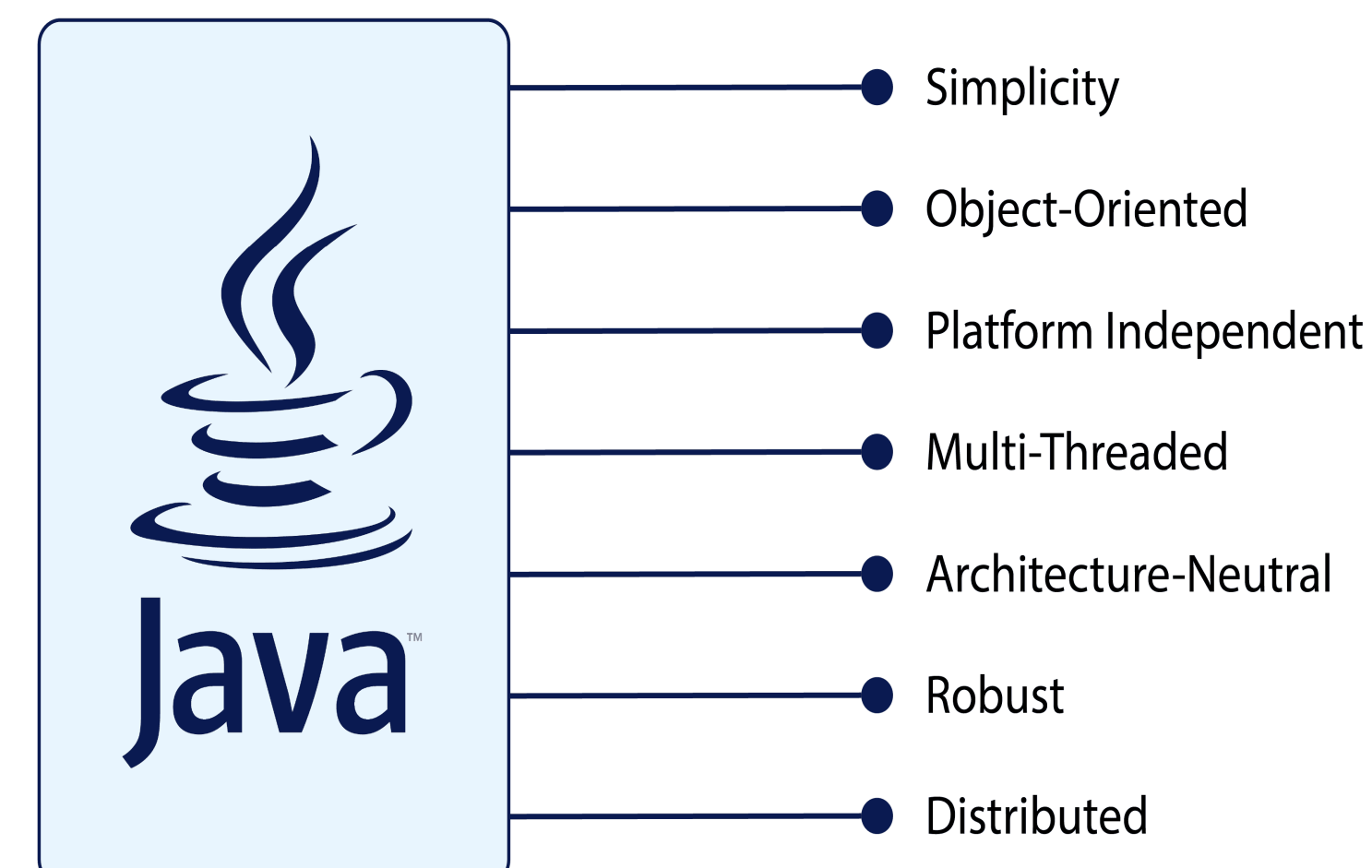
        else //The condition when the if statement is false
            System.out.print("You may have a root beer!");

    }

}
```

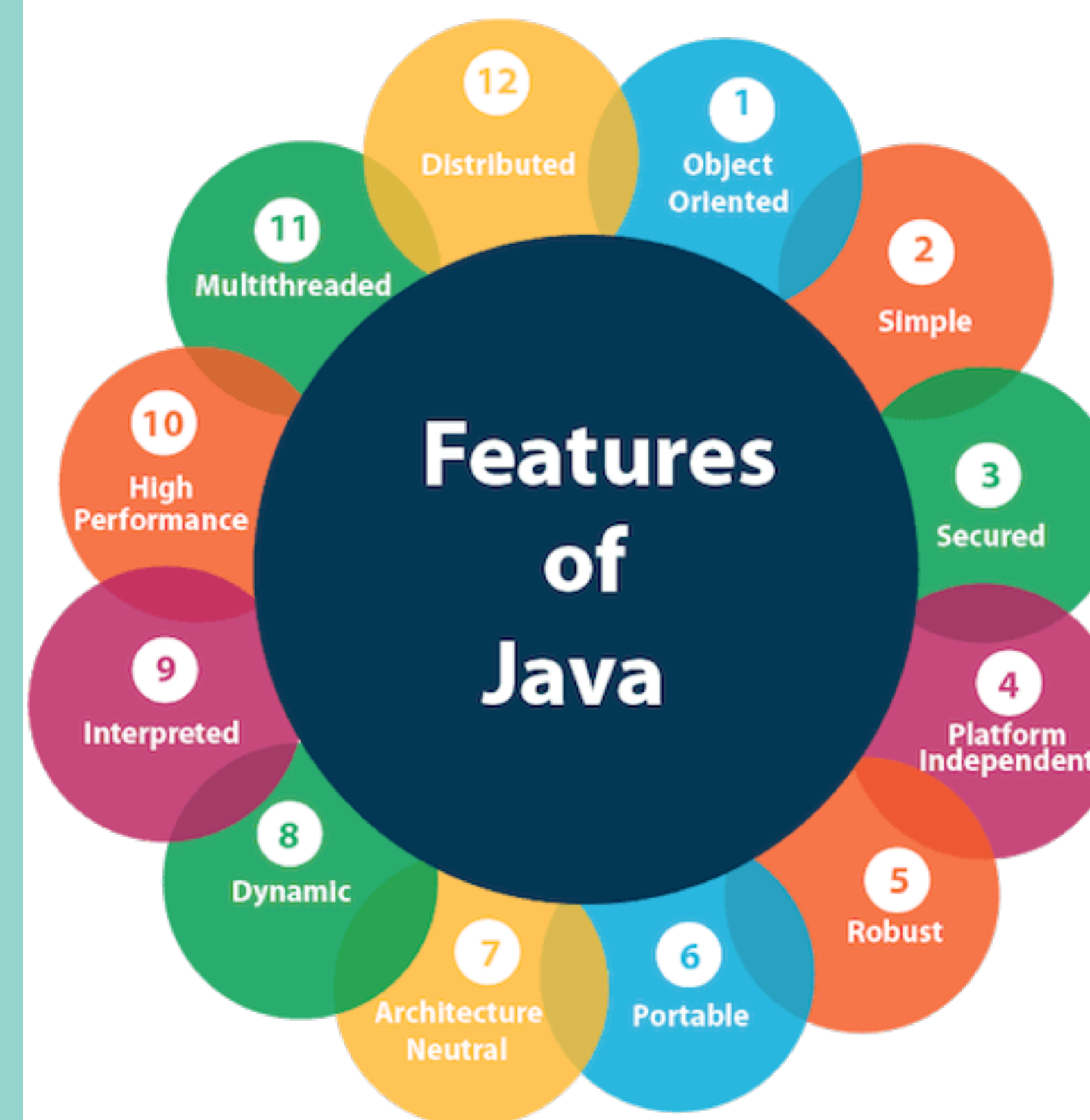
## What Makes Java Useful Today?

- Portability
  - Strong functionality on a variety of computing hardware
    - Virtual machine
      - Takes Java code from Android applications from one system and translates the code to work on another system.
- Object-Orientation provides security and simplicity
- Abstraction
  - We only care if the code works, not what is under the hood.
- Encapsulation
  - Keeping code in a class private, meaning it is not available throughout the entire system
- Inheritance
  - Allows for the creation of classes that make use of data from other classes.
- Polymorphism
  - Code and variables may be used more than once to signify different scenarios.



## The Future of Java

- Java is not expected to disappear anytime soon
  - Streaming applications
  - Websites and mobile software
  - Internet of Things
    - Every device in the world that connects to the internet to obtain and shares data
  - Artificial Intelligence
    - Computers that think and come up with solutions like us!
  - Big Data
    - A rivalry between “volume, velocity, and variety”
    - Predicts what the world will want



## Learning Java Is Valuable and Possible

- Real life problem-solving skills
- Plenty of employment opportunities in mobile software
- Employment may be significantly profitable
- Designed to be beginner friendly
- A community of programmers are available to help others
- A great starting point before learning additional programming languages
- Java is available on PCs, Macs, and Androids



## References

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