

Research on Application Value of Computer Software Development in Java Programming Language

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Abstract: After the industrial revolution, the level of productivity has greatly improved, and the social economy has developed rapidly. At the same time, science and technology have also made rapid progress under the economic drive. As a product of modern science and technology, Internet has made an indelible contribution to human society. In this context, the Java programming language based on computer software development has also entered people's field of vision, and has received widespread attention. This paper is to briefly introduce some of the origins, characteristics and main applications of the Java programming language in people's production and life.

1. Introduction

With the rapid development and update of the Internet, Java evolved from a simple language program to a programming language for computer software development. Many features of the Java programming language determine its position in the Internet. With the development of the World Wide Web, the Java programming language has made breakthroughs in many places, and has made great progress in performance and utility. As a programming language for computer software development, Java has been widely recognized. Many of its advantages are bound to have broad development prospects in the Java programming language.

2. The origin of Java programming language

2.1. The historical development of Java programming language

The predecessor of the Java programming language is the oak language. At the beginning, for a variety of reasons, the oak language has not been widely used, even though the oak language has many technical advantages. Later, with the rapid development of the World Wide Web and the Internet, the JAVA language has become a popular language. A successful test is to find a test that has not been discovered so far. The purpose of the test is to find potential errors and defects with minimal manpower and time. Test cases should be carefully designed according to the requirements of each stage of development, design, and other document or program content structure, and use these examples to run the program and find errors. System testing is a key step in ensuring system quality and reliability. It is the final review of the design and implementation of system analysis systems during system development^[1].

2.2. The advantages of Java programming language for other languages

The biggest advantage of the JAVA language is that it is suitable for network development. In this constantly evolving and progressive society, it is undoubtedly important to continuously develop and update. Compared with C++, the Java programming language shows more advantages. The Java programming language inherits all the advantages of the C++ language, and some of the pitfalls of the C++ programming language. In the C++ programming language, there are some pointers that are prone to errors, and the Java programming language discards these shortcomings. The significant advantages of the Java programming language are shown in Figure 1:

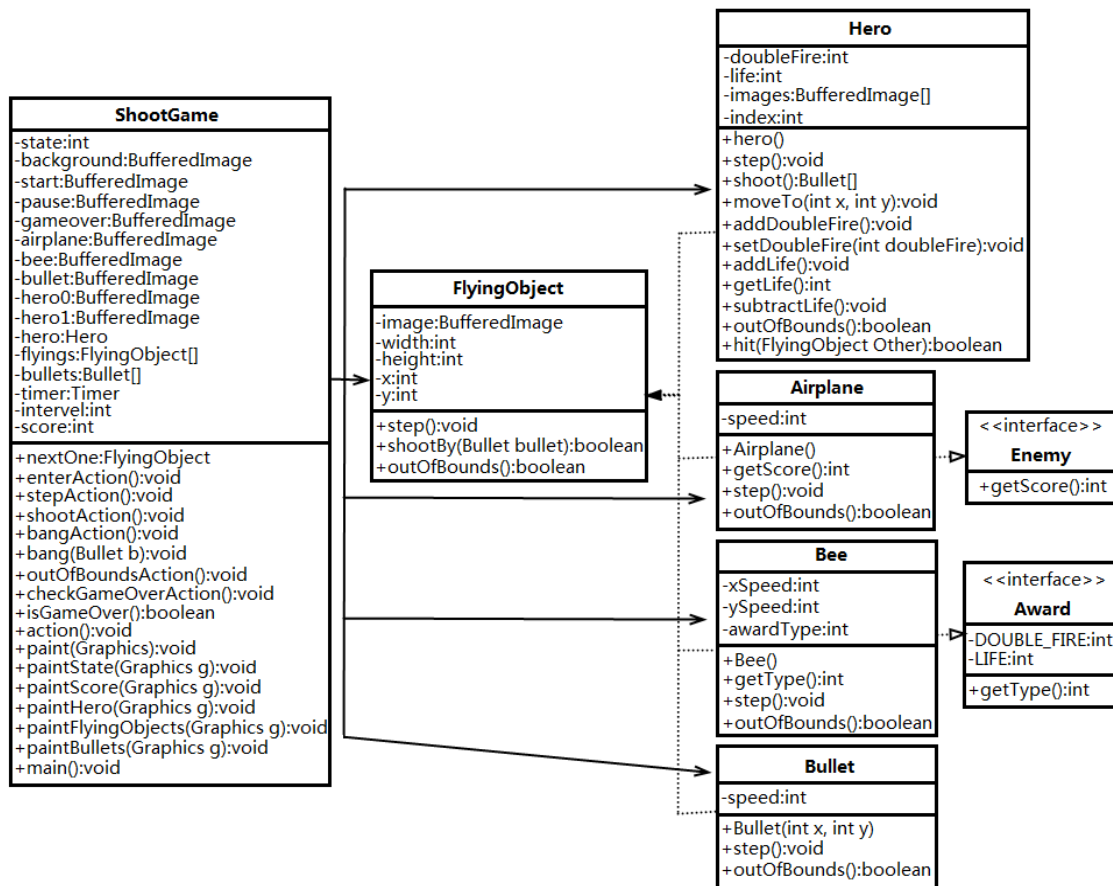


Figure 1: The overall architecture and benefits of the Java programming language

In addition to the structure shown in Figure 1, the shortcomings such as operator overloading, the Java programming language is also cleverly avoided. The Java programming language is further optimized in terms of memory management. Its own garbage collection function recycles some objects that are not referenced, which greatly reduces the programmer's operation. The special compilation method of the Java programming language greatly reduces the running speed of its program, but the development of J2SE1.4.2 has greatly improved the running speed of the Java programming language^[2].

3. Features of Java programming language

3.1. The simple Java programming language syntax

The Java programming language has its unique advantages in many places. The first thing to note is that the syntax of the Java programming language is very simple and easy to understand. At this point, the Java programming language is very similar to C++. So when I first came into contact with the Java programming language, I felt that it was very similar to the C++ programming language. Because the C++ programming language is used in the writing of much computer software, it is very popular, and the grammatical structure of the Java programming language is very similar to the grammatical structure of the C++ programming language. Therefore, when people write programs using the Java programming language, Can quickly master the skills. For example, the application of the Java programming language shown in Figure 2 in a computer software development:

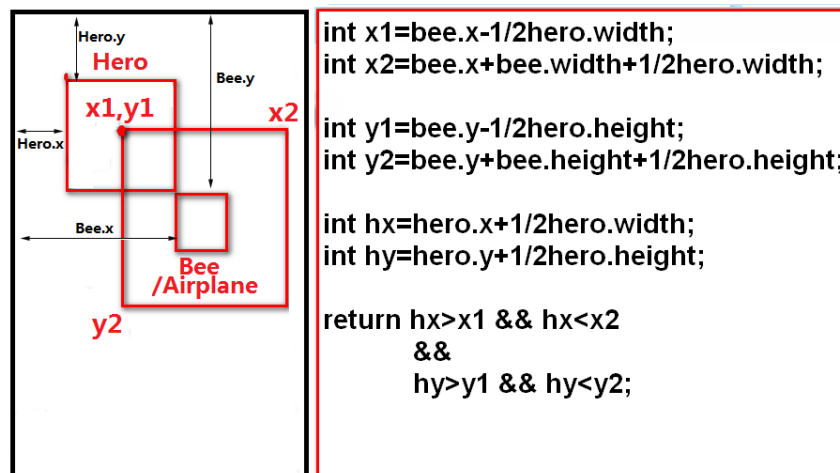


Figure 2: Judgment of impact in the Java programming language

As shown in Figure 2 above: The Java programming language is developed on the basis of the C++ programming language. It takes advantage of the C++ programming language and discards some of the problems that are common in the C++ programming language. In the process of continuous development, the Java programming language takes its essence and goes to its dregs, gradually forming its own system of advantageous programming methods^[3].

3.2. Java programming language has good portability

It is well known that programming languages have good portability that can be greatly user-friendly. The Java programming language has this advantage. The Java programming language can download and use some applications on the web site. Users can download images, HTML and other required programs on the web page. In addition to the features of some of the Java programming languages that have been introduced, the Java programming language includes high-performance, robust, dynamic, distributed, and multi-threaded features.

3.3. Java programming language is an object-oriented language

In the process of writing a program, in order to avoid the complicated work caused by the overall writing of the computer source program, a complicated computer program is often divided into several simple modules, and then independently written according to different modules. The independence of the module is an important guarantee for the programmer to carry out effective maintenance procedures. Inheriting Flying Object, rewriting the Step method, implementing the Award interface, the bees can move left and right, so the attributes containing the moving speed and the judgment beyond the boundary, the code is as follows:

```

package shoots;
import java.util.Random;
public class Bee extends FlyingObject implements Award{
    private int xSpeed = 1;
    private int ySpeed = 2;
    private int awardType;
    public Bee(){
        image = ShootGame.bee;
        width = image.getWidth();
        height = image.getHeight();
        Random rand = new Random();
        x = rand.nextInt(ShootGame.WIDTH-this.width);
        y =-this.height;
        awardType=rand.nextInt(2);
    }

```

The Java programming language is just an object-oriented programming language. Each module

in the object-oriented programming language is built on the basis of the application and performs functional decomposition. So the Java programming language has greatly improved the efficiency of programmers maintaining computer programs^[4].

4. Conclusions

The JAVA programming language is a unique programming language. In the period of rapid development of the World Wide Web and the Internet, the Java programming language has developed and developed rapidly. From the original language of the original JAVA language to the now mature Java programming language, there has been a tremendous change. The simplicity of the Java programming language and its many features not found in other programming languages has earned it a place in the market. Software developers will definitely choose this programming language as their object of use after seeing so many significant advantages of the Java programming language. In this way, the Java programming language will be promoted and applied to a greater extent.

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