

# Java

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- [Java](#) - final
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# Java - final

final Java

Code

class

class

Compile error



Override

Compile error



Compile error

final

final



- final abstract
- Reflection API

final



# JDA □ Discord Forum

## Channel □ Thread □

### Code □

```
public class Main extends ListenerAdapter {

    public static final String TOKEN = "<BOT_TOKEN_HERE>";
    public static final String SERVER_ID = "<SERVER_ID_HERE>";
    public static final String PROJECT_FORUM_ID = "<FORUM_ID_HERE>";

    public static void main(String[] args) throws InterruptedException {
        JDA jda = JDABuilder.createDefault(Main.TOKEN).build();

        jda.addEventListener(new Main());
    }

    @Override
    public void onReady(ReadyEvent event) {
        System.out.println("Bot is ready");
        JDA jda = event.getJDA();

        Guild server = jda.getGuildById(SERVER_ID);
        assert server != null;
        ForumChannel channel = server.getForumChannelById(PROJECT_FORUM_ID);
        assert channel != null;
        System.out.printf("Channel name: %s%n", channel.getName());
        List<ThreadChannel> threadChannels = channel.getThreadChannels();

        for(ThreadChannel thread : threadChannels){
            System.out.printf("Thread: %s%n", thread.getName());
        }
    }
}
```

```
// 二氧化ニ  
Bot 二氧化ニ  
// jda.shutdown();  
}  
}
```



- 二氧化ニ JDA 二氧化ニ Guild 二氧化ニ (二氧化ニ Discord Server 二氧化ニ ) 二氧化ニ Guild 二氧化ニ ForumChnnel 二氧化ニ
- 二氧化ニ二氧化ニ getThreadChannels() 二氧化ニ二氧化ニ ThreadChannel 二氧化ニ List
- 二氧化ニ List 二氧化ニ二氧化ニ二氧化ニ for 二氧化ニ



- 二氧化ニ **TOKEN** 二氧化ニ Channel ID 二氧化ニ (Hardcode) 二氧化ニ二氧化ニ
- JDA 二氧化ニ二氧化ニ (JDA.shutdown()) 二氧化ニ Gradle 二氧化ニ

# Java □ - Type Casting

Type Casting □□□□□□□□□□□□□□

Casting □□□

□□□□□□

```
class Animal {  
    void speak(){  
        System.out.println("Default speak");  
    }  
}
```

```
class Bird extends Animal {  
    @Override  
    void speak() {  
        System.out.println("□ □ ");  
    }  
}
```

```
class Dog extends Animal {  
    @Override  
    void speak() {  
        System.out.println("□□□ □");  
    }  
}
```

```
public class main {  
    public static void main(String[] args) {  
        Animal animal = new Animal();  
        Bird bird = new Bird();  
        Dog dog = new Dog();  
  
        animal.speak();  
        bird.speak();  
        dog.speak();  
  
        // Upcasting and Downcasting  
    }  
}
```

```
Animal animal2;
animal2 = bird; // Upcasting
animal2.speak(); // works normally

Bird bird2;
// bird2 = animal; // Down casting, compile error
// bird2 = (Bird)animal; // Compile pass
// bird2.speak(); // but throw ClassCastException error

Dog dog2;
// dog2 = bird; // Obviously not working for compiling
// dog2 = (Dog)bird; // Cannot casting to another child class, compile error.

}
```

- Bird casting Animal Upcasting Upcasting  
Compiler
  - animal casting Bird Animal Bird Compiler  
Compiler Downcasting Compiler
  - (Bird)animal Compiler Compiler Compiler  
Compiler OK Compiler  
Compiler ClassCastException Runtime error JVM
  - Animal class Compiler ... Compiler