Section 1.1

## Exercises

1.  Write a program TenHelloWorlds.java that prints "Hello, World" ten times.

package javaapplication1;

public class HelloWorld {

  public static void main(String[] args) {

    for (int x=0;x<10;x++)

    {

    System.out.println("Hello, World");

    }

  }

}

2.  Describe what happens if, in HelloWorld.java, you omit

a. Public

    When running an error is thrown by the compiler:
    Error: no se ha encontrado el método principal en la clase
    javaapplication1.HelloWorld, defina el método principal del
    siguiente modo:\n   public static void main(String[] args)\nde lo
    contrario, se deberá ampliar una clase de aplicación JavaFX
    javafx.application.Application
    Java Result: 1
    BUILD SUCCESSFUL (total time: 0 seconds)

b. Static

    Error: el método principal no es static en la clase javaapplication1.HelloWorld,
    defina el método principal del siguiente modo:
      public static void main(String[] args)
    Java Result: 1
    BUILD SUCCESSFUL (total time: 1 second)

c. Void

    Not able to run, because is throwing an error "invalid method
    declaration"

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d. `Args`

   Error: \<Identifier> expected

3. Describe what happens if, in `HelloWorld.java`, you misspell (by, say, omitting the second letter)

   a. `Public "cannot find symbol" – error message`

   b. `static "cannot find symbol" – error message`

   c. `void "cannot find symbol" – error message`

   d. `args nothing`

4. Describe what happens if you try to execute Hi.java with:

   a. `java Hi`

   ```
   C:\java>java Hi
   Hi, Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: 0
           at Hi.main(Hi.java:6)
   ```

   b. `java Hi @!&^%`

   ```
   C:\java>java Hi @!&^%
   Hi, @!. How are you?
   "%" no se reconoce como un comando interno o externo,
   programa o archivo por lotes ejecutable.
   ```

   c. `java Hi 1234`

   ```
   C:\java>java Hi 1234
   Hi, 1234. How are you?

   C:\java>
   ```

   d. `java Hi.class Bob`

   ```
   C:\java>java Hi.class Bob
   Error: no se ha encontrado o cargado la clase principal Hi.class
   ```

   e. `java Hi.java Bob`

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```
C:\java>java Hi.java Bob
Error: no se ha encontrado o cargado la clase principal Hi.java
```

f.  java Hi Alice Bob

```
C:\java>java Hi Alice Bob
Hi, Alice. How are you?
```

5.  Modify UseArgument.java to make a program UseThree.java that takes three
    names and prints out a proper sentence with the names in the reverse of the order
    given, so that for example, "java UseThree Alice Bob Carol" gives "Hi
    Carol, Bob, and Alice.".

public class UseArgument {

  public static void main(String[] args) {

    System.out.print("Hi, ");

    System.out.print(args[2]);

    System.out.print(", ");

    System.out.print(args[1]);

    System.out.print(", and ");

    System.out.print(args[0]);

    System.out.println(". How are you?");

  }

}

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# Web Exercises

1. Write a program Initials.java that prints your initials using nine rows of asterisks like the one below.

```
public class Initials {

  public static void main(String[] args) {

    System.out.println("    *      **          *      **********  ");

    System.out.println("   ***      **          ***      **    ** ");

    System.out.println("   ** **      **          ** **      **    ** ");

    System.out.println("  **  **      **          **  **      **    ** ");

    System.out.println("  *********      **          *********    ********** ");

    System.out.println(" **    **  **          **    **  **    ** ");

    System.out.println(" **      **  **          **    **  **    ** ");

    System.out.println("**        **  **          **      **  **    ** ");

    System.out.println("*          *  **********  *      *  **********  ");

    }

}
```

2. Describe what happens if, in `HelloWorld.java`, you omit

   a. `Main`

   

   b. `String`

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```
C:\java>javac HelloWorld.java
HelloWorld.java:2: error: illegal start of type
[] args) { System.out.println("Hello World") ; } }
^
HelloWorld.java:2: error: ')' expected
[] args) { System.out.println("Hello World") ; } }
 ^
HelloWorld.java:2: error: ';' expected
[] args) { System.out.println("Hello World") ; } }
   ^
HelloWorld.java:2: error: illegal start of type
[] args) { System.out.println("Hello World") ; } }
       ^
HelloWorld.java:2: error: <identifier> expected
[] args) { System.out.println("Hello World") ; } }
       ^
HelloWorld.java:2: error: ';' expected
[] args) { System.out.println("Hello World") ; } }
       ^
HelloWorld.java:2: error: illegal start of type
[] args) { System.out.println("Hello World") ; } }
                 ^
HelloWorld.java:2: error: ';' expected
[] args) { System.out.println("Hello World") ; } }
                 ^
HelloWorld.java:2: error: invalid method declaration; return type required
[] args) { System.out.println("Hello World") ; } }
                 ^
HelloWorld.java:2: error: illegal start of type
```

c. HelloWorld

```
C:\java>javac HelloWorld.java
HelloWorld.java:1: error: <identifier> expected
public class { public static void main (
             ^
```

d. System.out

```
C:\java>javac HelloWorld.java
HelloWorld.java:2: error: cannot find symbol
String [] args) { println("Hello World") ; } }
                  ^
  symbol:   method println(String)
  location: class HelloWorld
1 error
```

e. Println

```
C:\java>javac HelloWorld.java
HelloWorld.java:2: error: cannot find symbol
String [] args) { System.out("Hello World") ; } }
                         ^
  symbol:   method out(String)
  location: class System
1 error
```

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3. Describe what happens if, in `HelloWorld.java`, you omit

    a. the `;`

```
C:\java>javac HelloWorld.java
HelloWorld.java:2: error: ';' expected
String [] args) { System.out.println("Hello World")  } }
                                                     ^
```

    b. the first `"`

```
C:\java>javac HelloWorld.java
HelloWorld.java:2: error: ')' expected
String [] args) { System.out.println(Hello World") ; } }
                                           ^
HelloWorld.java:2: error: unclosed string literal
String [] args) { System.out.println(Hello World") ; } }
                                                 ^
HelloWorld.java:2: error: reached end of file while parsing
String [] args) { System.out.println(Hello World") ; } }
                                                        ^
3 errors
```

    c. the second `"`

```
C:\java>javac HelloWorld.java
HelloWorld.java:2: error: unclosed string literal
String [] args) { System.out.println("Hello World) ; } }
                                           ^
HelloWorld.java:2: error: reached end of file while parsing
String [] args) { System.out.println("Hello World) ; } }
                                                       ^
2 errors
```

    d. the first `{`

```
C:\java>javac HelloWorld.java
HelloWorld.java:1: error: '{' expected
public class HelloWorld  public static void main (
                       ^
1 error
```

    e. the second `{`

```
C:\java>javac HelloWorld.java
HelloWorld.java:2: error: ';' expected
String [] args)  System.out.println("Hello World") ; } }
               ^
HelloWorld.java:2: error: class, interface, or enum expected
String [] args)  System.out.println("Hello World") ; } }
                                                        ^
2 errors
```

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    f.  the first }

```
C:\java>javac HelloWorld.java
HelloWorld.java:2: error: reached end of file while parsing
String [] args) { System.out.println("Hello World") ;   }
                                                          ^
1 error

C:\java>
```

    g.  the second }

```
C:\java>javac HelloWorld.java
HelloWorld.java:2: error: reached end of file while parsing
String [] args) { System.out.println("Hello World") ;   }
                                                          ^
1 error

C:\java>
```

4.  Describe what happens if, in `HelloWorld.java`, you misspell (by, say, omitting the second letter)

    a. `Main`

```
C:\java>javac HelloWorld.java

C:\java>java HelloWorld
Error: no se ha encontrado el método principal en la clase HelloWorld, defina el
 método principal del siguiente modo:\n    public static void main(String[] args)
\nde lo contrario, se deberá ampliar una clase de aplicación JavaFX javafx.appli
cation.Application
```

    b. `String`

```
C:\java>javac HelloWorld.java
HelloWorld.java:2: error: cannot find symbol
Sring [] args) { System.out.println("Hello World") ; } }
^
    symbol:   class Sring
    location: class HelloWorld
1 error

C:\java>
```

    c. `HelloWorld`

```
C:\java>javac HelloWorld.java
HelloWorld.java:1: error: class HlloWorld is public, should be declared in a fil
e named HlloWorld.java
public class HlloWorld { public static void main (
       ^
1 error
```

    d. `System.out`

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```
C:\java>javac HelloWorld.java
HelloWorld.java:2: error: package Sstem does not exist
String [] args) { Sstem.out.println("Hello World") ; } }
                      ^
1 error
```

e. Println

```
C:\java>javac HelloWorld.java
HelloWorld.java:2: error: cannot find symbol
String [] args) { System.out.pintln("Hello World") ; } }
                            ^
  symbol:    method pintln(String)
  location: variable out of type PrintStream
1 error
```

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