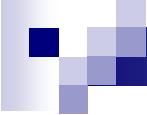# Java programming (Tutorial-4)
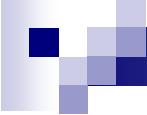
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Outline

- Eclipse
- String of Java
- Class Library
- Exercises

Eclipse

- Starting Eclipse
- Creating a project in Eclipse
- Creating a class in Eclipse
- Spotting compile errors in Eclipse
- Run programs in Eclipse

Exercise

```java
import java.util.*;

public class Sth_about_String {

public static void main(String[] args) {

String a=new String("This is the first String"); /* The length is 25 bits */
String a_copy=new String("This is the first String");
String b=new String("This is the second String");/* The length is 26 bits */
int length=a.length();/* get the length of String a*/
boolean eq1=a.equals(a_copy); /* for the Comparing with a and a_copy*/
boolean eq2=a_copy.equals(a); /* for the Comparing with a_copy and a*/
boolean eq3=a_copy.equals(b); /* for the Comparing with a and b*/
```

Exercise-cont.

boolean eq4=(a==a_copy);
char character_1=a.charAt(length-1);/* a is pointing to the last character */
   /*char character_2=a.charAt(length); a is pointing to the last character */
int index=a.indexOf('s'); /* Calculating the s charactor's location */
int A_int='A';
int a_int='a';
int B_int='B';
int b_int='b';

Exercise-cont.

```java
System.out.println("length="+length);
System.out.println("boolean eq1="+eq1);
System.out.println("boolean eq1="+eq2);
System.out.println("boolean eq3="+eq3);
System.out.println("boolean eq4="+eq4);
System.out.println("the last character is "+character_1);
/*System.out.println("the last character is "+character_2); */
System.out.println("character s is the "+(index+1)+"th character.");
System.out.println("A is represented by"+A_int);
System.out.println("a is represented by"+a_int);
System.out.println("B is represented by"+B_int);
System.out.println("b is represented by"+b_int);

}

}
```
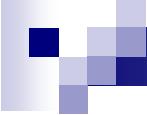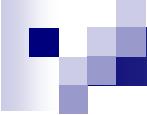
String Class

- Declare a string

- Determine the length of a string

- Find the index of a given character within a string

- Determine if a given character exist in a string

- Compare two string objects fro equality

- Try to access an non-existed index in the string

Class Library

- Learning the API of a class library from its documentation
- Adding the jar file to their classpath
- Importing the Fraction class
- Create objects using both constructors
- Performing fraction arithmetic