Strings and Loops

CSE 5910

www.eecs.yorku.ca/course/5910

length method

```
public int length()
```

Returns the length of this string.

Question

Is this method static?

length method

```
public int length()
```

Returns the length of this string.

Question

Is this method static?

Answer

No.

length method

```
public int length()
```

Returns the length of this string.

Question

Does this method return anything?

`length` method

```
public int length()
```

Returns the length of this string.

Question

Does this method return anything?

Answer

Yes, a value of type `int`.

charAt method

```
public char charAt(int index)
```

Returns the char value at the specified index.

Question

How do you extract the first character of

```
String word = in.next();
```

charAt method

```
public char charAt(int index)
```

Returns the char value at the specified index.

Question

How do you extract the first character of

```
String word = in.next();
```

Answer

```
char letter = word.charAt(0);
```

charAt method

```
public char charAt(int index)
```

Returns the char value at the specified index.

Question

How do you extract the last character of

```
String word = in.next();
```

charAt method

```
public char charAt(int index)
```

Returns the char value at the specified index.

Question

How do you extract the last character of

```
String word = in.next();
```

Answer

```
char letter = word.charAt(word.length() - 1);
```

If only I had known . . .

Problem

Print, for example,

```
If I had bought ibm shares on 01/15/68
and sold them on 01/16/93,
I would have made a 1599.88% loss
```

where `ibm` is provided as a command line argument.

Let's start with something simpler

Problem

For all but the first line of the file gts.csv, convert the first value to a `Date` object and the third and fourth value to values of type `double`.

Let's start with something simpler

Problem

Print the highest high value (the maximum of the third value of each but the first line).

Let's start with something simpler

Problem

Print the highest value (the maximum of the third value of each but the first line) and the date at which this highest value occurred.

Let's start with something simpler

Problem

Print

- the highest value (the maximum of the third value of each but the first line) and the date at which this highest value occurred.
- the lowest value (the minimum of the fourth value of each but the first line) and the date at which this lowest value occurred.

If only I had known . . .

Problem

Print, for example,

```
If I had bought ibm shares on 01/15/68
and sold them on 01/16/93,
I would have made a 1599.88% loss
```

where `ibm` is provided as a command line argument.

Command-line arguments

Question

How does the user provide command-line arguments?

Command-line arguments

Question

How does the user provide command-line arguments?

Answer

```
java StockAnalysis "ibm"
```

Command-line arguments

Question

How does the user provide command-line arguments?

Answer

```
java StockAnalysis "ibm"
```

Question

How does the client get the command-line arguments?

Command-line arguments

Question

How does the user provide command-line arguments?

Answer

```
java StockAnalysis "ibm"
```

Question

How does the client get the command-line arguments?

Answer

As the parameter of the `main` method.

Command-line arguments

Question

How does the user provide command-line arguments?

Answer

```
java StockAnalysis "ibm"
```

Question

How does the client get the command-line arguments?

Answer

As the parameter of the `main` method.

Question

What is the type of the parameter of the `main` method.

Command-line arguments

Question

How does the user provide command-line arguments?

Answer

```
java StockAnalysis "ibm"
```

Question

How does the client get the command-line arguments?

Answer

As the parameter of the `main` method.

Question

What is the type of the parameter of the `main` method.

Answer

`String[]`: an array of `Strings`.

Command-line arguments

```
public static void main(String[] args)
```

Command-line arguments

public static void main(String[] args)

Question

How does the client get the first command-line argument?

Command-line arguments

public static void main(String[] args)

Question

How does the client get the first command-line argument?

Answer

`args[0]`

Command-line arguments

public static void main(String[] args)

Question

How does the client get the first command-line argument?

Answer

`args[0]`

Question

How does the client get the second command-line argument?

Command-line arguments

public static void main(String[] args)

Question

How does the client get the first command-line argument?

Answer

`args[0]`

Question

How does the client get the second command-line argument?

Answer

`args[1]`

Command-line arguments

```
public static void main(String[] args)
```

Question

How does the client get the number of command-line arguments?

Command-line arguments

public static void main(String[] args)

Question

How does the client get the number of command-line arguments?

Answer

`args.length`

Let's start with something simpler

Problem

Print the content of the URL

`http://ichart.finance.yahoo.com/table.csv?s=SYMBOL&ignore=.csv`

where `SYMBOL` is provided as a command-line argument.

Question

Which class can we use to represent a URL?

URL

Question

Which class can we use to represent a URL?

Answer

`java.net.URL`

URL

Question

Which class can we use to represent a URL?

Answer

`java.net.URL`

Question

Do we need to import this class?

URL

Question

Which class can we use to represent a URL?

Answer

`java.net.URL`

Question

Do we need to import this class?

Answer

Yes.

URL

Question

Which class can we use to represent a URL?

Answer

`java.net.URL`

Question

Do we need to import this class?

Answer

Yes.

Question

Which constructor can we use?

URL

Question

Which class can we use to represent a URL?

Answer

`java.net.URL`

Question

Do we need to import this class?

Answer

Yes.

Question

Which constructor can we use?

Answer

`URL(String)`

Input

Question

Which class can we use to read input?

Input

Question

Which class can we use to read input?

Answer

`java.util.Scanner`

Input

Question

Which class can we use to read input?

Answer

`java.util.Scanner`

Question

Which constructor can we use?

Input

Question

Which class can we use to read input?

Answer

`java.util.Scanner`

Question

Which constructor can we use?

Answer

`URL(InputStream)`

Input

Question

Which class can we use to read input?

Answer

`java.util.Scanner`

Question

Which constructor can we use?

Answer

`URL(InputStream)`

Question

How do we get from URL to InputStream?

Input

Question

Which class can we use to read input?

Answer

`java.util.Scanner`

Question

Which constructor can we use?

Answer

`URL(InputStream)`

Question

How do we get from URL to InputStream?

Answer

`openStream`

Wednesday and Monday

- There will be no class on Wednesday (co-curricular days).
- There will be office hours on Wednesday.
- There will be a test on Monday at 15:30 in Lab 1006C of the Lassonde Building. The material for the test is Chapter 1–5 of the textbook. The questions will be similar to the eChecks.
- There will also be a lecture on Monday.

November 1

By November 1, each group is expected to email the instructor

- a list with the names of the members of the group,
- a description of the project (you are suggested to provide a number of milestones ranging from objectives that are easily accomplishable to more challenging objectives), and
- a list of Java packages to be used in the project, including the URL where the package can be found.