

COMPUTER SCIENCE 105
SUMMER SCHOOL 2006



Tutorial 1

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Question 1

A)

Give the types of the following expressions:

`int [][] ar = new int[10][10];`

`ar`

`ar[3][4]`

`String[][][] ar = new String[3][3][3];`

`ar[2][1]`

`ar[1][2][1]`

B)

Draw a diagram of `ar`, as it would be in the computers memory.

`String [][] ar = {{"a","b"}{"v"}{"x","y","z"}}`

C)

Which of the following expressions are legal for
`int [][] ar = new int[3][4];`

`ar.length;`

`ar[1] +1;`

`ar[2][3].length;`

Question 2

A)

Designing software is the most time consuming part of the SDLC, why is this?

B)

How does documentation relate to the “maintenance” phase of the SDLC?

Question 3

Look up the documentation for the class `java.lang.Integer`.

A)

What is the superclass of `Integer`?

B)

Consider the following code:

```
Integer x = new Integer(5);
```

```
((Number)x).floatValue();
```

Which class is the `floatValue()` method executed in?

C)

What interfaces are directly implemented by `Number`?

Which ones are inherited from its superclass?

D)

The superclass of everything in java is which class?