

# Formatting Output

proportional vs non-proportional

widths are  
proportional  
i.e. vary by  
character

www  
iii

Arial

⇓  
every character  
is the same  
width

www  
iii

Courier

# spaces vs Tabs

wwwwwwwwww



in Java we use escape sequences

e.g. how do you print a  
" in Java

```
System.out.print("\");
```

Common Escape Sequences

\\t	→ tab
\\n	→ new line
\\	→ slash
\\"	→ quote

```
System.out.print("Hello\nmy");  
System.out.println(" name\nis\n");  
System.out.println("\t Derf");
```

```
1 Hello  
2 my  
3 name  
4 is  
5  
6 Derf  
7
```

Write a single `System.out.print` that will give the following output

```
1 This
2      is
3 how
4      I
5          want
6 the output
7          to
8      look!
```

```
S.O.P("This \n\t is\nhow \n\tI \n\t\t want\n\t the output \n\t\t to\n\t look!");
```

The  
rain  
in  
Spain  
falls  
mainly  
on  
the  
plain

S.O.P("The\n\t rain\n\t\t in\n\t\t\t Spain\n\t\t\t\t falls\n\t\t\t\t\t mainly\n\t\t\t\t\t\t on\n\t\t\t\t\t\t\t the\n\t\t\t\t\t\t\t\t Plain");

handout Java 1.5 or Java 5  
currently Java 1.4.2

System.out.format will  
replace  
System.out.print

# JAVA TEST

Thursday March 11

not on Computer  
will include

1. Java code  $\Rightarrow$  find error
2. Java code  $\Rightarrow$  Give output
3. Formatting output
4. `System.out.print`
  - `.println`
  - `.format`
5. JOptionPane
6. Write program code
7. if's and for's

```
for (int i=1; i<=5; i++) {  
    System.out.print(i);  
}
```

~~1  
2  
3  
4  
5~~

12345 ✓

1  
1  
2  
3  
4  
5  
5  
4  
3  
2  
1

```
for (i = 1; i <= 5; i++) {  
  for (j = 1; j <= 3; j++) {  
    System.out.println(i);  
  }  
}
```

nested  
loop

