

Covid Temps

app design



occupation: doctor

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age: 47

Scenario

A doctor meets 10 patients between 9am and 10am every morning and administers a covid test. Currently the system is paper-based. The doctor needs a system that is easy to use and works on a computer.

Activity requirements

Write a program that will solve this problem for the doctor. Be creative. Your app must have:

1. 4+ functions calls (not including main())
2. Use of loops
3. Use of selection (if/else)
4. Use of variables (global or local)
5. Use of input and output
6. Use of a random number generator (be creative!)

Assessment

Your app design will be assessed against the above requirements.

This is an opportunity for creativity, pairwork and problem-solving. Use your skills!

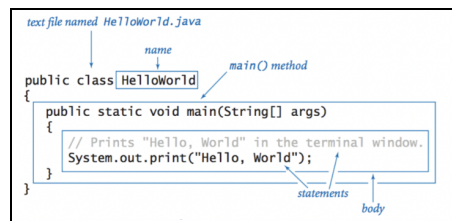
Background Information

The current system sees the doctor using a thermometer to take the temperature of the patient. He then administers a covid antigen test.

The following table illustrates the result of this testing and the required action:

Temperature	Antigen Test	Required action
$t < 38$	False	"Go home"
$t < 38$	True	"Come back tomorrow"
$t \geq 38$	False	"Isolate at home for 2 days"
$t \geq 38$	True	"Isolate in hospital for 2 days"

JAVA CHEAT SHEET



type	set of values	common operators	sample literal values
int	integers	+ - * / %	99 12 2147483647
double	floating-point numbers	+ - * /	3.14 2.5 6.022e23
boolean	boolean values	&& !	true false
char	characters		'A' '1' '%' '\n'
String	sequences of characters	+	"AB" "Hello" "2.5"

Printing.

```
void System.out.print(String s)    print s
void System.out.println(String s)  print s, followed by a newline
void System.out.println()          print a newline
```

Nested if-else statement.

```
if (income < 0) rate = 0.00;
else if (income < 8925) rate = 0.10;
else if (income < 36250) rate = 0.15;
else if (income < 87850) rate = 0.23;
else if (income < 183250) rate = 0.28;
else if (income < 398350) rate = 0.33;
else if (income < 400000) rate = 0.35;
else rate = 0.396;
```

```
Scanner scan = new Scanner(System.in);

Double num1 = scan.nextDouble();

Int num2 = scan.nextInt();

String word = scan.nextLine();
```

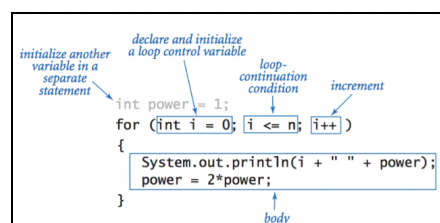
Comparison operators.

op	meaning	true	false
==	equal	2 == 2	2 == 3
!=	not equal	3 != 2	2 != 2
<	less than	2 < 13	2 < 2
<=	less than or equal	2 <= 2	3 <= 2
>	greater than	13 > 2	2 > 13
>=	greater than or equal	3 >= 2	2 >= 3

```
int rand = (int) (Math.random() * 100);
```

Booleans.

values	true or false		
literals	true	false	
operations	and	or	not
operators	&&		!



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

```
}
```

```
public static _____ (
){
```

```
}
```

```
public static _____ (
){
```

```
}
```

```
public static _____ (
){
```

```
}
```

```
public static _____ (
){
```

```
}
```

```
public static _____ (                                     ) {
```

