

UNIT 6 Conditional Structures Worksheet 2

Name: _____

Timeline: 1/2 Class

I. Comparison vs. Relational operators

1. What are these COMPARISON operators in English?

| | |
|-----------------------|------------------------------------|
| == <u>equal to</u> | != <u>not equal to</u> |
| > <u>greater than</u> | >= <u>greater than or equal to</u> |
| < <u>less than</u> | <= <u>less than or equal to</u> |

2. In your own words explain what is the purpose of a comparison operator and give an example of use:

This is to help the computer do something within guidelines, like if you wanted to talk to them only if they were older than one year old you'd use something with >1.

Code Example:

```
if (age > 1){  
    engage();  
}
```

Logical AND (&&), Logical OR (||), Logical NOT (!)

3. Logical (Relational) operators.

Write in your own words the reasons for using logical operators and definition:

This can help make your guidelines more specific allowing for more concise and complicated programs.

Using the examples below write your own syntax for each.

- a) If my temperature is greater than 37 OR I have a sore throat, take me to see the doctor.
- b) If I am stung by a bee AND I am allergic to bees, take me to see the doctor

| | |
|---|--|
| a) <pre>if ((temperature > 37) (soreThroat == TRUE)){ doctor(); }</pre> | b) <pre>if ((beeSting == TRUE) && (beeAllergy == TRUE)){ doctor(); }</pre> |
|---|--|

II. Guessing Game 1

Type in the following lines exactly as below and test the program (File name: GuessingGame1.pde):

| | |
|---|--|
| <pre>1. //Declaration section 2. int guess; 3. //program title 4. void title() { 5. println("\t\tGuessing game"); 6. } 7. //program introduction 8. void introduction(){ 9. title(); 10. println("Try to guess a number between 1 and 10"); 11. } 12. void userInput() { 13. guess=getInt("Enter your guess"); 14. }</pre> | <pre>15. void display() { 16. int answer=8; 17. println("too high!"); 18. println("too low!"); 19. println("right on!"); 20. } 21. void setup () { 22. introduction(); 23. userInput(); 24. display(); 25. }</pre> |
|---|--|

List t 3 errors (logical or otherwise) you discovered when you tested the program?

1. You don't actually use the answer to say any of the statements, or at all.
2. There's a lack of comments from userInput and on
3. guess isn't used for any of the outputs either.

What is the purpose of the answer variable in method display?

There is no purpose right now, but it is probably for comparing with the guess so the correct statement can be executed to help, or at least inform, the user.

