Java Conditions

Hello!

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Conditions

- Java has the following conditional statements:
  - Use if to specify a block of code to be executed, if a specified condition is true
  - Use else to specify a block of code to be executed, if the same condition is false
  - Use else if to specify a new condition to test, if the first condition is false
  - Use switch to specify many alternative blocks of code to be executed

The if Statement

```
if (condition) {
  // block of code to be executed if the condition is true
}
```

```
int x = 20;
int y = 18;
if (x > y) {
  System.out.println("x is greater than y");
}
```

The else Statement

```
if (condition) {
  // block of code to be executed if the condition is true
} else {
  // block of code to be executed if the condition is false
}
```

```
int time = 20;
if (time < 18) {
  System.out.println("Good day.");
} else {
  System.out.println("Good evening.");
}
// Outputs "Good evening."
```

The else if Statement

```
if (condition1) {
  // block of code to be executed if condition1 is true
} else if (condition2) {
  // block of code to be executed if the condition1 is false and condition2
} else {
  // block of code to be executed if the condition1 is false and condition2
}
```

```java
int time = 22;
if (time < 10) {
  System.out.println("Good morning.");
} else if (time < 20) {
  System.out.println("Good day.");
} else {
  System.out.println("Good evening.");
}
// Outputs "Good evening."
```

Short Hand If...Else

```
variable = (condition) ? expressionTrue :  expressionFalse;
```

```
int time = 20;
String result = (time < 18) ? "Good day." : "Good evening.";
```

```
if (time < 18) {
  System.out.println("Good day.");
} else {
  System.out.println("Good evening.");
}
```

Java Switch Statements

```
switch(expression) {
  case x:
    // code block
    break;
  case y:
    // code block
    break;
  default:
    // code block
}
```

```java
int day = 4;
switch (day) {
  case 1:
    System.out.println("Monday");
    break;
  case 2:
    System.out.println("Tuesday");
    break;
  case 3:
    System.out.println("Wednesday");
    break;
  case 4:
    System.out.println("Thursday");
    break;
  case 5:
    System.out.println("Friday");
    break;
```

```java
int day = 4;
switch (day) {
  case 6:
    System.out.println("Today is Saturday");
    break;
  case 7:
    System.out.println("Today is Sunday");
    break;
  default:
    System.out.println("Looking forward to the Weekend");
}
// Outputs "Looking forward to the Weekend"
```

Anylogic

sample

- Please solve quadration equation

$$x_2 \leftarrow \frac{-b+\sqrt{delta}}{2a}$$

$$x_1 \leftarrow \frac{-b-\sqrt{delta}}{2a}$$

Thanks!

Any questions?

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