**CS508 Assignment #1 spring 2023**

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**Problem Statement:**

The following code snippet contains some conditional (*nested if else /else if based*) statements. Which are difficult to understand as they do not contain any starting or ending keywords against each statement. You, being a programming language expert, are required to put "**then**" and "**end if/else/else if**" at appropriate places to get the desired result.

**Code Snippet:**

At start, x contains 100 (*i.e. x = 100*)

if (x > 50)

x = x \* 5;

}if (x > 200){

x = x - 200;

}if (x > 350){

x = x - 150;

}else{

x = x + 150;

}

if (x > 400){

x = x - 150;

}if (x < 500){

x = x + 150;

}if (x == 500){

x = x + 200;

}else if (x > 400){

x = x - 100;

}else if (x < 650){

x = x + 100;

}else{

x = x \* 5;

}

At end, x contains 350.

**Note:**

*This is a language-free code, which does not require any specific programming language to compile or execute. You are simply required to guess the flow of execution on the basis of value of x and put "****then****" and "****end if/else/else if****" at appropriate places (see the hint given below). Furthermore, you can also add extra lines or spaces in your solution as well.*

**Hint:**

|  |  |
| --- | --- |
| Difficult to Understand | Easily Understandable |
| if (a > b){  b = 5  }else if(a < b){  a = 5  }else  a = b | if (a > b){ then  b = 5  end if  }else if(a < b){then  a = 5  end else if  }else then  a = b  end else |

**Solution:**

**Code Snippet:**

At start, x contains 100 (*i.e. x = 100*)

if (x > 50){then

x = x \* 5;

end if

}if (x > 200){ then

x = x - 200;

end if

}if (x > 350){ then

x = x - 150;

end if

}else{then

x = x + 150;

end else

}

if (x > 400){then

x = x - 150;

end if

}if (x < 500){then

x = x + 150;

end if

}if (x == 500){then

x = x + 200;

end if

}else if (x > 400){then

x = x - 100;

end else if

}else if (x < 650){then

x = x + 100;

end else if

}else{then

x = x \* 5;

end else

}

At the end, x contains 350.