 

**Advanced Placement Computer Science**

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**Unit 5:Strings/Short Circuit Evaluation**

**Lesson: Short Circuit EvaluationFILLEDOUT**

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What is the problem with this loop? When x is 0, this code will throw an exception because you can’t divide by 0.

int x=50;

while(100/x != (some target value) && x!=0)  
{

System.out.println(x);  
 x--;  
}

How is it fixed?

while(x!=0 && 100/x != some target value){

Summarize short circuit evaluation

Short circuit evaluation: Going from left to right, if java encounters a false condition in an AND, it will stop executing

If java encounters an or statement || , if the first statement is true, skips all the rest because the overall condition is true.

C++ and Java guarantee short circuit evaluation however Pascal always checks all conditions.  
(need to use nesting)

public class City {

public String name;

public int population;

}

City[ ] cityList = new City[6]; //assuming the array is populated with the values below but that the 4th element’s name is null

|  |  |
| --- | --- |
| index | value |
| 0 | 812 |
| 1 | 1300 |
| 2 | 2112 |
| 3 | null |
| 4 | 98 |
| 5 | 3145 |

|  |  |  |
| --- | --- | --- |
| Memory address | name | population |
| 812 | “Cairo” | 21,323,000 |
| 1300 | “Durban” | 3,176,254 |
| 2112 | “Harare” | 1,542,000 |
| 98 | “Lagos” | 21,300,000 |
| 3145 | “Khartoum” | 5,989,000 |

Write a for loop that searches the array for the string “Khartoum” Make sure the name is not null before doing a comparison on that name. Print out the population if you find the String “Khartoum”

for(int i =0;i< cityList.length; i++){  
 if(cityList[i] != null &&  
 cityList[i].name.equals(“Khartoum”)){  
 System.out.println(cityList[i].population);  
 }

}

Does anyone remember this code from ArrayCopying?

if(tryList[i] == null || tryList[i].equals(“”)) …. Can you reverse the two parts of the if statement?

They cannot be reversed safely because if the reference is null you cannot invoke the .equals operator on a null pointer.