

COP 3330 Suggested Exercises for Exceptions

Exceptions

1) The first program shown during the semester, Circle2.java, would crash if the user entered a non-integer radius. Edit this program so that if the user enters the wrong type of data (InputMismatchException) that you catch this Exception and reprompt the user to re-enter the radius, and continue to do so until the user enters an integer. Here is a link to the program:

<https://www.cs.ucf.edu/~dmarino/ucf/introjava/Circle2.java>

2) Another early program shown in class was one that reads in test scores and computes their average. Though unlikely, if all scores entered the user are invalid, then no average exists. In the original version an if statement is used to avoid the division by 0. Rewrite this code so that the division is attempted in a try clause and the ArithmeticException is caught so that the program doesn't crash by dividing by 0. Here is the original program to edit:

<https://www.cs.ucf.edu/~dmarino/ucf/introjava/Average.java>

3) Write a program that asks the user to enter a string and an index into the string. Try printing out the character stored at that index, but if the index is out of bounds, catch the StringIndexOutOfBoundsException and print out an error message stating that the string doesn't have a character at that index.

4) Write code that utilizes objects in some way shape or form and catches a potential NullPointerException.

5) Write code that utilizes arrays in some way and catches a potential ArrayIndexOutOfBoundsException.

6) Create your own FractionDivideByZeroException. Test it by creating Fraction objects, having the divide method in the fraction class throw this exception, and catching the exception elsewhere.