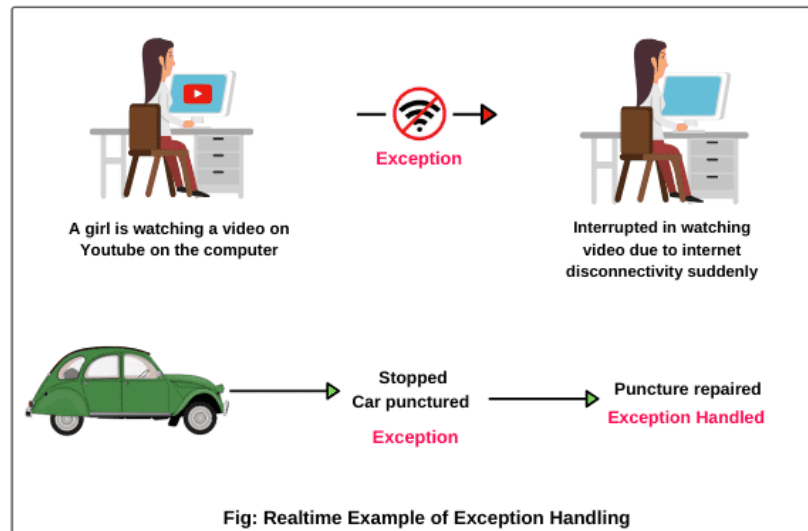


What is Exception in a programming language?



Exception Handling: The "Emergency Plan"

Imagine you are a **chef in a restaurant kitchen**. You have a recipe (your program's code) that tells you step-by-step how to prepare a dish. Most of the time, things go smoothly.

But sometimes, **unexpected problems** occur:

- You're supposed to get an ingredient from the fridge, but it's **empty** (like trying to open a file that doesn't exist).
- You're told to divide the ingredients into 4 equal parts, but someone accidentally tells you to divide it into **0 parts** (like trying to divide by zero).
- You expect a numerical measurement, but someone gives you "five hundred grams" written in **text** instead of the number 500 (like getting text when you expect a number).

If you, the chef, don't have a plan for these unexpected problems, you might just **stop cooking altogether** and yell, "ERROR! Cannot proceed!" (This is like your program crashing).

Exception Handling is like having an "**Emergency Plan**" for your program. It's a set of instructions that tells your program: "Hey, try to do this normal operation. BUT, if something unexpected (an 'exception') happens, don't just crash! Instead, follow *these backup steps* to handle the problem gracefully."

