

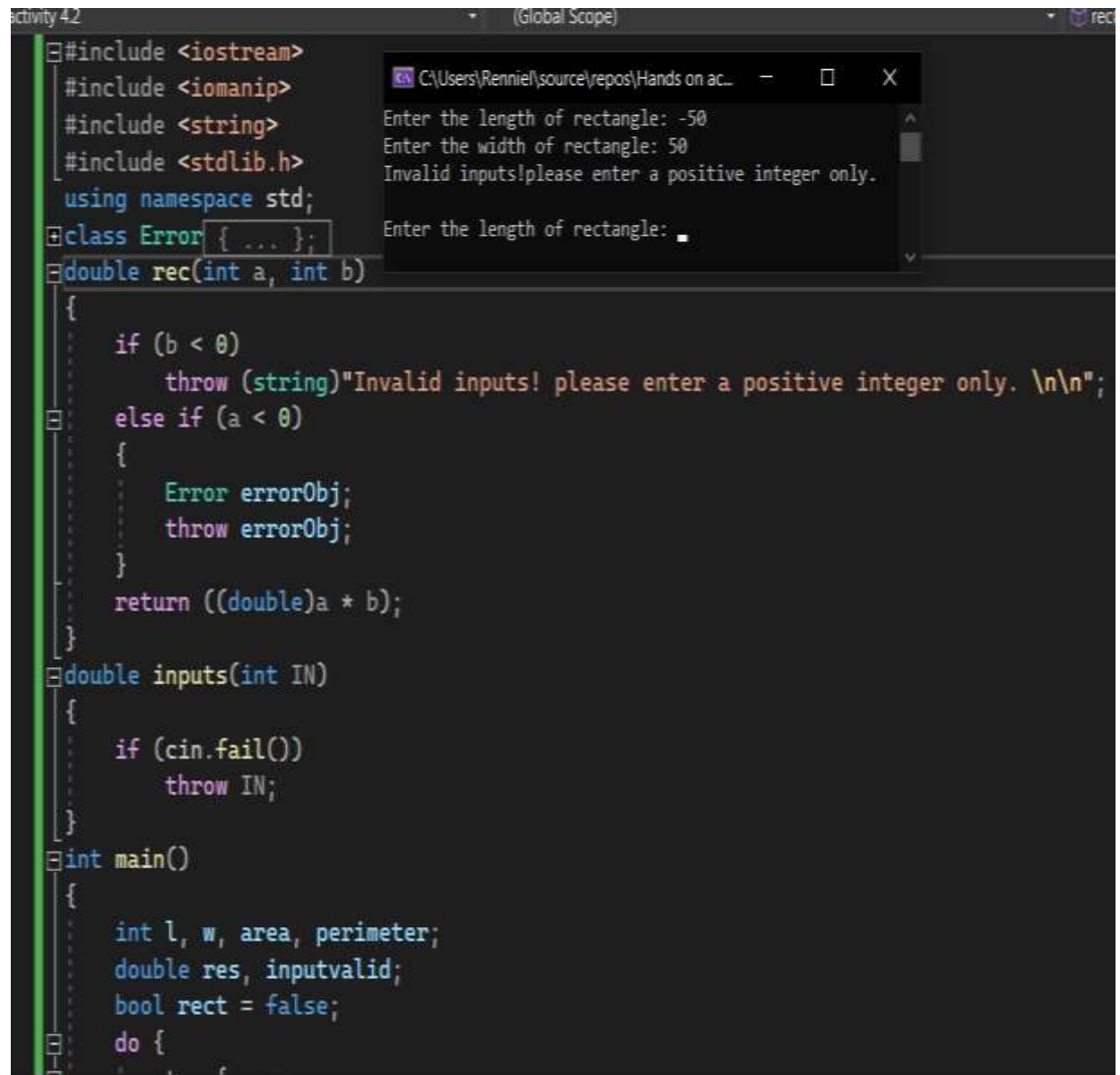
## Hands On Activity 4.2 – Try-Catch Statement

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CPE11S5

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```
#include <iostream>
#include <iomanip>
#include <string>
#include <stdlib.h>
using namespace std;

class Error { ... };

double rec(int a, int b)
{
    if (b < 0)
        throw (string)"Invalid inputs! please enter a positive integer only. \n\n";
    else if (a < 0)
    {
        Error errorObj;
        throw errorObj;
    }
    return ((double)a * b);
}

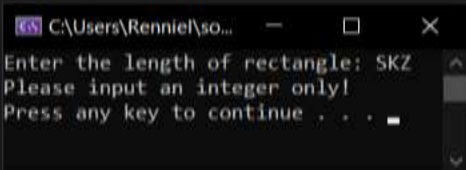
double inputs(int IN)
{
    if (cin.fail())
        throw IN;
}

int main()
{
    int l, w, area, perimeter;
    double res, inputvalid;
    bool rect = false;
    do {
```

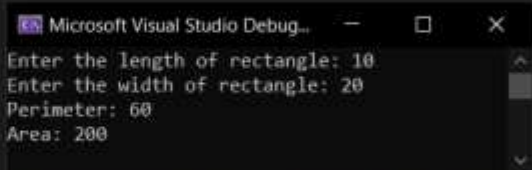
Enter the length of rectangle: -50  
Enter the width of rectangle: 50  
Invalid inputs!please enter a positive integer only.  
Enter the length of rectangle: .

```
do {
    try {
        cout << "Enter the length of rectangle: ";
        cin >> l;
        inputvalid = inputs(l);
        cout << "Enter the width of rectangle: ";
        cin >> w;
        inputvalid = inputs(w);
        res = rec(l, w);

        perimeter = 2 * (l + w);
        cout << "Perimeter: " << perimeter << "\n";
        area = (l * w);
        cout << "Area: " << area << "\n";
        rect = true;
    }
    catch (string& s)
    {
        cerr << s << endl;
        system("pause");
        system("cls");
    }
    catch (Error&)
    {
        cerr << "Invalid inputs!please enter a positive integer only. \n\n";
    }
    catch (...)
    {
        cerr << "Invalid inputs!please enter a positive integer only. \n\n";
    }
} while (!rect);
return 0;
```



```
catch (string& s)
{
    cerr << s << endl;
    system("pause");
    system("cls");
}
catch (Error&)
{
    cerr << "Invalid inputs!please enter a positive integer only. \n\n";
}
catch (...)
{
    cerr << "Please input an integer only! \n";
    cin.clear();
    system("pause");
    system("cls");
}
} while (!rect);
return 0;
```



## Conclusions:

Earlier while doing this activity, I was able to print out the area and perimeter. However, I couldn't print out the error message even if I already put a negative integer. So I got stuck for a while because I'm trying to figure out what's the problem in my code. After trying and testing for too many times, I've finally figured it out. I've noticed that I didn't input a variable where I can store my functions that's why I wasn't able to print out the error message.

I've learned that in try-catch statement, If Boolean is false, it will repeat my execution all over again. However, if it's true, it will terminate my program and the catch block. I've also learned that if I throw a string with a message, the 1<sup>st</sup> catch block will catch it and the "s" is just a variable where I can store the message. In my 2<sup>nd</sup> catch block, I only inputted "(Error&)" without a variable because as you can see in my 1<sup>st</sup> function, what I threw for the 2<sup>nd</sup> catch block is empty variable. While in 3<sup>rd</sup> catch block, as you can see, I only inputted "...". That's because as you can see in my second function, I doesn't have a data type for letters. Additionally, I've learned system pause and clear. This means that in you include this in your program, it will pause and clear your program. However, to be able to use it, you need to include "stdlib.h".

I affirm that I will not give or receive any unauthorized help in this activity/exam and that all work will be my own.