

Lab 7.2.1 Exceptions: catch block

Objectives

Familiarize the student with:

- handling exceptions;
- writing his/her own exception classes;
- passing additional information in exceptions;

Scenario

Write a program that calculates the area of some simple figures (i.e. a square and a rectangle). One function per figure. Check if the function arguments are greater than 0 – if they aren't, throw an exception. This program should use your own exceptions to communicate with a higher-level code. Add some attribute in your exception to pass a message to the user. Some boilerplate code is included below.

```
#include <iostream>

using namespace std;
//add your own exception class here
//add functions code here
int main(void) {
    float a, b, r;
    cin >> a;
    cin >> b;
    try
    {
        float rsquare = square_area(a);
        float rrectangle = rectangle_area(a,b);
        cout << rsquare << endl << rrectangle << endl;
    }
    //add a suitable catch block here
    return 0;
}
```

Example input

```
2
1
```

Example output

```
4
2
```

Example input

```
-10
6
```

Example output

Your input is not valid. The area can't be negative.