

## *Exercises week 2*

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November 27, 2017

### **Exercise 11**

## Exercise 12

## Exercise 13

## Exercise 14

## Exercise 15

## Exercise 16

*Learn how to end a program safely*

We used the following code,

main.ih

```
1 #include <iostream>
2
3 #include "demo/demo.h"
4
5 using namespace std;
6
7 void function1();
8 void function2();
9 void function3();
```

main.cc

```
1 #include "main.ih"
2
3 int main()
4 try
5 {
6     Demo demo1;
7     function1();
8     cout << "Not executed\n";
9 }
10 catch (...)
11 {
12     cout << "Program stops\n";
13 }
```

function1.cc

```
1 #include "main.ih"
2
3 void function1()
```

```

4 | try
5 | {
6 |     Demo demo2;
7 |     function2();
8 |     cout << "Not executed\n";
9 | }
10 | catch (...)
11 | {
12 |     throw;
13 | }

```

#### function2.cc

```

1 | #include "main.ih"
2 |
3 | void function2()
4 | try
5 | {
6 |     Demo demo3;
7 |     function3();
8 |     cout << "Not executed\n";
9 | }
10 | catch (...)
11 | {
12 |     throw;
13 | }

```

#### function3.cc

```

1 | #include "main.ih"
2 |
3 | void function3()
4 | try
5 | {
6 |     Demo demo4;
7 |     throw "Exception at deepest level is thrown";
8 |     cout << "Not executed\n";
9 | }
10 | catch (char const *message)

```

```

11 | {
12 |     cout << message << '\n';
13 |     throw;
14 | }

```

demo/demo.ih

```

1 | #include "demo.h"
2 |
3 | #include <iostream>
4 |
5 | using namespace std;

```

demo/demo.h

```

1 | #ifndef EX16_DEMO_H
2 | #define EX16_DEMO_H
3 |
4 | class Demo
5 | {
6 |     public:
7 |         Demo();
8 |         ~Demo();
9 | };
10 |
11 | #endif

```

demo/demo.cc

```

1 | #include "demo.ih"
2 |
3 | Demo::Demo()
4 | {
5 |     cout << "Constructor called\n";
6 | }

```



demo/destructor.cc

```
1 | #include "demo.ih"
2 |
3 | Demo::~Demo()
4 | {
5 |     cout << "Destructor called\n";
6 | }
```

## Exercise 17

## Exercise 18

## Exercise 19