

MIT WORLD PEACE UNIVERSITY

Computer Networks
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MODULE 3
EXCEPTION HANDLING, FILE AND IO STREAMS

NOTES

Prepared By
P34. Krishnaraj Thadesar

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1 Exceptions

- An exception is an unusual often unpredictable event, detectable by software or hardware, that requires special processing occurring at runtime.
- In C++, a variable or a class object represents an exceptional **event**.
- **Exceptions**, Indicate problems that occur during a programs execution.
- They Occur infrequently.
- If we dont handle them, the program crashes or falls into unkonwn state.
- To fix this we need an exception handler, which is a secction of program code that is designed to execute when a particular exception occurs.
- This can resolve exceptions, allow a program to continue executing or notify the user of the program. It could even help you terminal teh program in a controlled manner.
- It makes your code *clear, robust and fault-tolerant*

1.1 Standard Exceptions

- Excetions thrown by the language.
- Exxceptions thrown by standard library Routines
- Excpetions thrown by user code, throw statement.

1.2 Handling Exceptions

- Programmers can handle any exceptions they choose, this may be all expcetions, or some.
- The things you can throw could be like int or char or sth, or it could even be some class object type.
- You can also have as many try blocks as possible for each try block.
- If not exception is thrown, then the exception handler is skipped.
- An example of handling exceptions in C is:

```
1      try:
2      {
3          // risky stuff
4      }
5      catch (Formal Parameter)
6      {
7          // handle the exception
8      }
9      catch (Formal Parameter)
10     {
11         // Handle yet another exception
12     }
13     catch (DivideByZeroException ex)
14     {
15         cout<<ex.what()<<endl;
```

```
16     }  
17
```

- There are 3 different kinds of syntaxes related to the throw keyword style

```
1     throw(exception)  
2     throw exception.  
3     throw  
4
```