

Free C++ course outline

- Hello world
helloWorld.cpp
Introduction on how to write a simple program that outputs the string “hello world” to the screen.
- Selecection
if and else
if and else and cin
ifAndElseWCin.cpp
Shows how to use if and else clauses in cpp. The input by the user is obtained using the cin method.
if and else and stringstream
ifAndElseWStringStream.cpp
Shows how to use if and else clauses in cpp. The input by the user is obtained using the cin method. Stringstream is used to separate data and user input.
- Variable Types
simple types
int
intEx.cpp
Shows how to use int variables in a program that makes simple calculations
float
floatEx.cpp
Shows how to use float variables in a program that makes simple calculations.
compound types
arrays
vectors
structs
simple structs
arrays of structs
strings/charseq
- Operators
- Loops
for
while
do while
- Pointers
ptr to int with function
ptr to float with function
ptr to char with function, function to change lowCase to UpCase
ptr to struct with function
ptr to charArr that converts all chars from lowCase to UpCase
- 1. Simple objects
Circle
circle.cpp
Square
square.cpp
Romb

Triangle

Cone

Bike, instances of several types of bikes

- Classes constructors
- Classes Destructor
- /u*Classes simple inheritance
- /u*Classes multiple inheritance
- Class friendship
- Classes polymorphism
- Simple overloading
- Possibly templates?
- File i/O
- Simple system programming in Linux?
- Threads?
- Using commandline argument argc. argv for example to tell a cpp program how many units of memory to allocate for a vector containing floats for examples.