Iostrean = input, output, stream

Cin = input.

Cout = output

Cerr = warning error message.

Clog = general information about the execution of the program.

Endl = manipulator, flushing the buffer associated with that device (ensure that all the generated outputs is being written).

Indicate end of file. Press “CTRL + z.

The integral types may be signed or unsigned.

Signed: represent a positive or negative number. Ex: if we assign an out of range value the program will crash etc.

Unsigned: represent values greater than or equal to zero. Ex: unsigned char can hold values from 0 – 255. If we set the unsigned char to -1 it will get the value 255.

If there is 2 variables (local and global) with the same name the compiler will execute the local.

If there is 2 variables (local and in a statement or loop) with the same name the compiler will execute the local variable.

Till skillnad från en referens måsste en pekare instansieras när den blir definerad.

& address

\*pointer

Alias declaration starts with using. Ex: using SI = SalesItem;

Auto, type specifier that deduces the type of a variable from its initializer.

Decltype, return the type of it´s operand. If you want to define a variable that deduces from an expression but not use the expression to initialize the variable.

decltype((i)) d; // error: d is int& and must be initialized

decltype(i) e; // ok: e is an (uninitialized)int

Differenc between auto and decltype: auto tells the compiler to deduce the expression type. Decltype tells the compiler to ask after the type of the expression.

In c++ we define our one data types by defining a class. Ex on defined classes, string, istream, ostream.

Preprocessor, program that runs before the compiler and changes the source text of our program. Is also used to define header gurads. Preprocesses variables can be true or false. Always uppercase letters.

constant expression Expression that can be evaluated at compile time.

String is an array of characters.

S[n] Retunerar en reference till char positionen n.

Getline, takes an input stream and a string.

<<endl, en the current line and flush the buffer.

Empty, retunerar en bool.

cctype Functions



Range for statement, Iterate through the elements in a given sequence and perform some operation on each value in that sequence. for(declaration : expression)   
 statement

String::size\_type is equivalent with allocator\_type::size\_type.

A Vector is like a list, it’s a dynamical array and contains objects of a given type.

A vector is a class template.

Templates are not functions or classes. They are instructions to the compiler for generating functions and classes.

Push\_back operation takes a value and pushes that value as a new last element to the back of the vector.

Vector can add elements at run time.

A range for can´t change the size of the sequence over which it is iterating.

A vector type always include its elements type.



The difference between a vector and array is that the array has a fixed size. Offers sometimes better run-time performance but has less flexibility.

The difference between a dynamical array and a vector is none.

In C# the list is the same as the vectors in C++

In C++ list is the same as linkedlist.

The vectors is XNA is mathematical. The vector has 4 kordinates and it´s not possible to store things in them.

Create a pointer to an array: int \*ptrs[10]; // ptrs is an array of ten pointers to int..

Int \*(&arry) [10] = ptrs; // arry is areference to an array of ten pointers.

Int (Parray) [10] = &arr; // Parray points to an array of ten ints

Int (&arrref) [10] = arr // arrRef refers to an array of ten ints.

Compiler converts array to an pointer at runtime.

String nums[] = {“one”,”two”}; //array of strings.

String \*p = &nums[0]; // p points to the first elements in nums.

decltype(ia) ia3 = {0,1,2,3,4,5,6,7,8,9}; // *ia3 is an array of ten ints*

auto ia2(&ia[0]); // *now it's clear that ia2 has type int\**

Difference between const and constexp:   
const: declares an object as constant.

Constexp: declares an object as fit for use.

When these to are used in functions the main difference is:

Const: can only be used for non-static member functions.

Constexp: Used with both member and non member functions, constructors. Declares the the function we want to use in the consexp.

In C++ multidimensional arrays don´t exist. It´s arrays of arrays.

Unary operators one &, \*, = etc.

Binary operators two ==, &&, ||.

Every expression in C++ is either an **rvalue** (pronounced “are-value”) or an **lvalue**

(pronounced “ell-value”).

Lvalue: refers to an object that persist beyond a single expression (object with a name).

Rvalue: is a temporary values that does not persist beyond the expression thas uses it. (result of calculation and expression).

we can use an lvalue when an rvalue is required, but we cannot use an rvalue when an lvalue (i.e., a location) is required.

*cond ? expr1 : expr2;* if the condition is true then expression1 is evaluated otherwise expression2 is evaluated.

The **sizeof** operator returns the size, in bytes, of an expression or a type name.

A named cast has the following form: *cast-name*<*type*>(*expression*);

; // null statement. A null statement is useful where the language requires a statement but the

program’s logic does not.

Variables defined in a while condition or while body are created and destroyed on each iteration.

s.260