

22/05  
A) ~~not~~ virtual number under to be intrusive to day best

B) not intrusive, need  $\rightarrow$  no modify classes but  
in part we can use type id to no

C) now index how C++  $\rightarrow$  C++

Pass in pointer to the next number

Reverse number

Automatic Conversion

Smart pointers

slide 27

find the number of ...

find the value of ...

B: Public virtual A } share  
 C: Run in A } one  
 ...

... B ... A } ...  
 C: R A } ...

... frame

... state

## new and delete

keyword new: memory allocation + object construction

↳ call operator new to allocate memory (operator new does not call constructor)  
↳ invoke constructor

## Change behavior

```
class MyClass {
public:
    void * operator new (size_t);
    void operator delete (void *);
};
```

• both do not exist in this pointer and are static by default

example: need to alter exception thrown in case of std::bad\_alloc

```
void * MyClass::operator new (size_t size) {
    void * storage = malloc (size);
    if (storage == NULL) throw " ";
}
```

• If overload new, may need to overload delete too

## Placement New

```
void * C::operator new (size_t size) {
    void * p = malloc (size);
    if (p == 0) throw " ";
    return p;
}
```

```
void C::delete (void * p) {
    C * p = new C;
    delete p;
}
```

```
int main {
    C * p = new C;
    delete p;
}
```

Abbildung

Abbildung  $f: A \rightarrow B$  + Abbildung  $g: B \rightarrow C$  sind komposition

(Abbildung  $f$  und  $g$ )  $g \circ f$  Abbildung  $A \rightarrow C$  ist  
Abbildung  $f$  und  $g$

Abbildung

Abbildung  $f: A \rightarrow B$

$f(x) = y$  (Abbildung  $f$ )  
 $f(x) = y$  (Abbildung  $f$ )  
 $f(x) = y$  (Abbildung  $f$ )

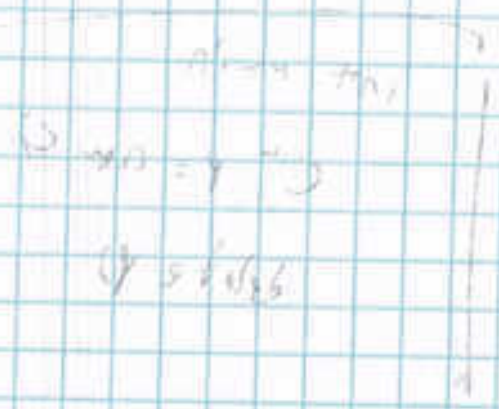
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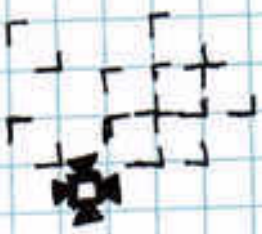


$f(x) = y$  (Abbildung  $f$ )  
 $f(x) = y$  (Abbildung  $f$ )  
 $f(x) = y$  (Abbildung  $f$ )

- English Major / music minor James Mayr
- Phil. Brian Mayr
- send link to James.

**CMS**

- old template:
  - intro of planning
    - ↳ • situation. customer define. simple words what
    - ↳ • the customer description
    - ↳ • user stories.
    - ↳ • define what is done & subjects
    - ↳ • define history - solo bank
    - ↳ • user stories
      - that
      - my
      - that



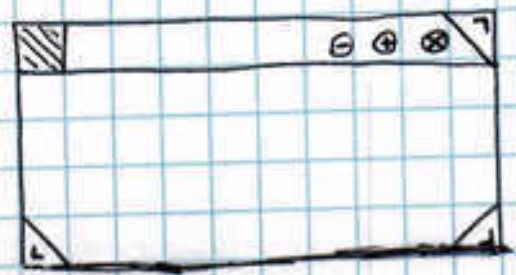
• agree content the tasks  $\Rightarrow$  Discovered in smaller box

• music website for:

www.lix.com/james mayr/music#!viewstock#  
by-compilation

war solids

→ • Real estate



type change into manufacturing layout

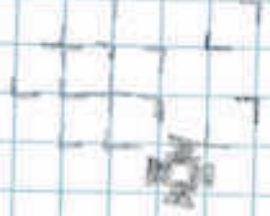
you will find

control unit box

**2ND**

grandi la Surface: stolyment blo.

- total area of floor
- available area
- available area
- available area
- available area
- available area
- available area
- available area



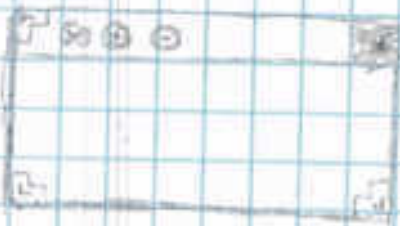
proposed = available area

• : all information

total area of floor = available area

of holes

2/10/2000





Iterator is a nested class inside

- `std::map <string, std::vector <string>>`
- `resize to bigger size to not have cost`
- `vector of iterators`

everything other than virtual as inline

- `Global condition pointer to 1st & last child c`
- `child 2 A) pointer to the last leaf`

`Issue <0, 1> => 0`

`Issue <1, 1> => 1`



Successive Substitution

(Kantor's algorithm, etc.) generates  
 the sequence of values for the  
 variables in the expression.

the sequence of values for the  
 variables in the expression.

Q. What is the value of the expression  
 when the variables are substituted?

$$A \Leftarrow \langle \dots \rangle$$

$$A \Leftarrow \langle \dots \rangle$$