

CST 223

Concepts of

Programming Languages

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Pv 182

Byte of 0x42

- 66 Decimal
- 'B'
- Part of "HYDROCHLOROFLUOROCARBON"
- INC DX ; 8086 assembly
- Part of a 64 bit, floating point value

Assembly Language

```
; -----  
; Writes "Hello, World" to the console using only system calls. Runs on 64-bit Linux only.  
; To assemble and run:  
;  
;     nasm -felf64 hello.asm && ld hello.o && ./a.out  
; -----  
  
        global    _start  
  
_start:  section    .text  
        mov       rax, 1           ; system call for write  
        mov       rdi, 1           ; file handle 1 is stdout  
        mov       rsi, message     ; address of string to output  
        mov       rdx, 13          ; number of bytes  
        syscall                    ; invoke operating system to do the write  
        mov       rax, 60          ; system call for exit  
        xor       rdi, rdi         ; exit code 0  
        syscall                    ; invoke operating system to exit  
  
        section    .data  
message: db        "Hello, World", 10 ; note the newline at the end
```

C

```
/* 'Hello World!' program */  
  
#include <stdio.h>  
  
int main()  
{  
    // printf() displays the string inside quotation  
    printf("Hello, World!");  
    return 0;  
}
```

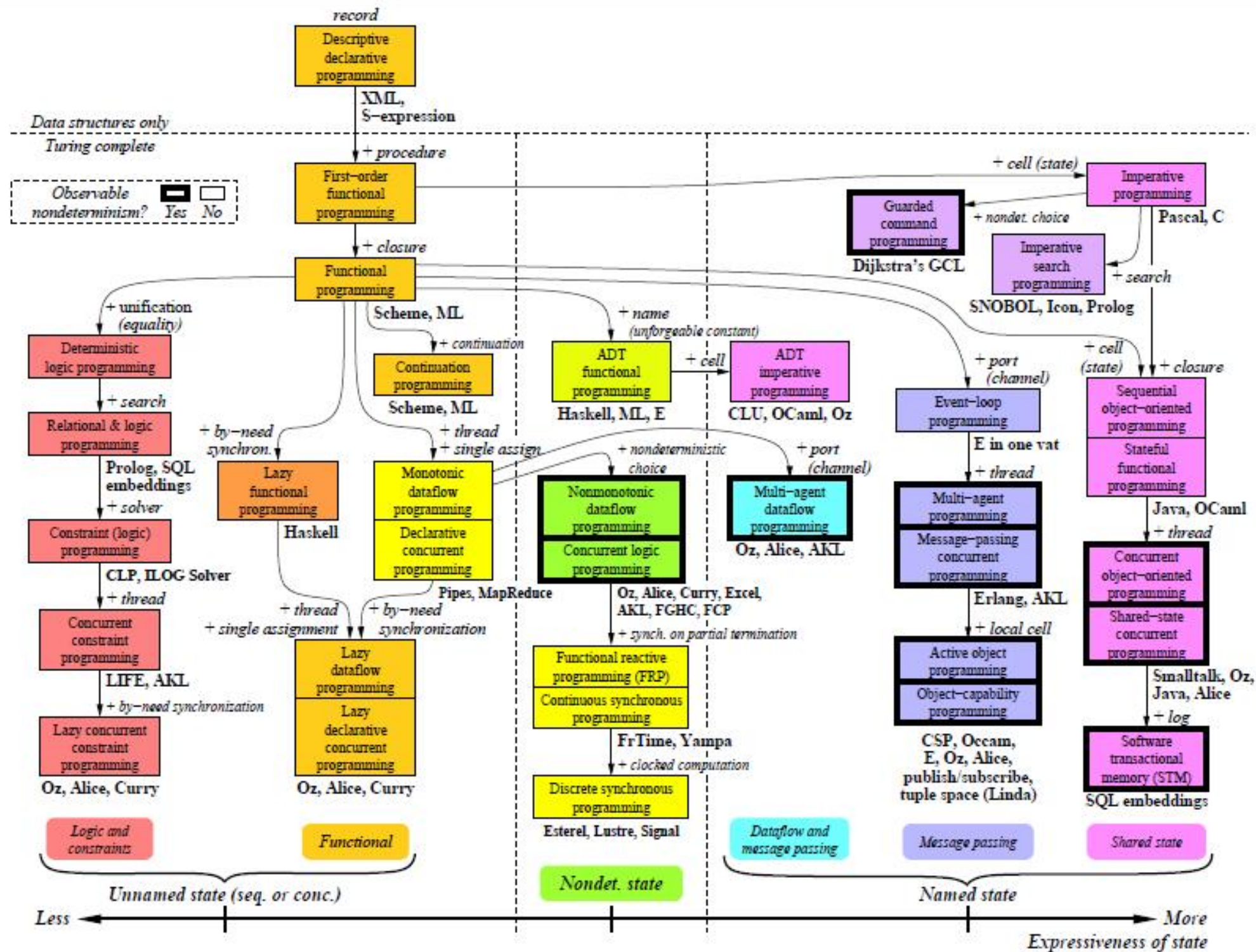
C++

```
// 'Hello World!' program

#include <iostream>

int main()
{
    std::cout << "Hello World!" << std::endl;
    return 0;
}
```

Concepts, Techniques, and Models of Computer Programming



Homework: Chapter 1

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Exercises

- 1.1
- 1.6
- 1.7
- 1.11
- 1.17-1.21