

1 Hello World Lecture Intro - Week 1 - Your First C++ Program - Introduction to Programming in C++ - edX.ts - VLC media player

Media Playback Audio Video Subtitle Tools View Help

# Process of Executing a Program

NYU TANDON ONLINE

The diagram illustrates the process of executing a program. It shows three main components: CPU, RAM, and Secondary Memory. The CPU is represented by a box with a register labeled 'PC: 100' and a value '01101011'. The RAM is a vertical stack of memory cells, with addresses 0, 100, 101, 102, 195, and 196. The values in RAM are: 0: 01101011, 100: 10100010, 101: 10011100, 195: 01010001. The Secondary Memory is a vertical stack of memory cells, with addresses 0, 52, 521, 522, 615, and 10100010, 10011100. The values in Secondary Memory are: 0: 11100001, 52: 01101011, 521: 10100010, 522: 10011100, 615: 01010001. Brackets labeled 'prog.exe' indicate the range of memory cells from 0 to 195 in RAM and from 0 to 615 in Secondary Memory. An arrow points from the CPU's PC register to the RAM cell at address 100.

CPU

RAM

Secondary Memory

03:54

21:25

1 Hello World Lecture Intro - Week 1 - Your First C++ Program - Introduction to Programming in C++ - edX.ts - VLC media player

Media Playback Audio Video Subtitle Tools View Help

# Process of Executing a Program

NYU TANDON ONLINE

The diagram illustrates the process of executing a program. It shows three main components: CPU, RAM, and Secondary Memory. The CPU is represented by a box with a register labeled 'PC: 101' and a value '10100010'. The RAM is a vertical stack of memory cells, with addresses 0, 100, 101, 102, 195, and 196. The values in RAM are: 0: 01101011, 100: 10100010, 101: 10011100, 195: 01010001. The Secondary Memory is a vertical stack of memory cells, with addresses 0, 52, 521, 522, 615, and 10100010, 10011100. The values in Secondary Memory are: 0: 11100001, 52: 01101011, 521: 10100010, 522: 10011100, 615: 01010001. Brackets labeled 'prog.exe' indicate the range of memory cells from 0 to 195 in RAM and from 0 to 615 in Secondary Memory. An arrow points from the CPU's PC register to the RAM cell at address 101.

CPU

RAM

Secondary Memory

04:17

21:25

1 Hello World Lecture Intro - Week 1 - Your First C++ Program - Introduction to Programming in C++ - edX.ts - VLC media player

Media Playback Audio Video Subtitle Tools View Help

NYU TANDON ONLINE

# Process of Executing a Program

CPU

RAM

Secondary Memory

04:25

21:25

1 Hello World Lecture Intro - Week 1 - Your First C++ Program - Introduction to Programming in C++ - edX.ts - VLC media player

Media Playback Audio Video Subtitle Tools View Help

NYU TANDON ONLINE

# Compilation

```
#include <iostream>
using namespace std;

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

prog.cpp

High-Level Language

Compilation

```
01101011
10100010
10011100
.
.
01010001
```

prog.exe

Machine Language

06:42

21:25