

Course Information

- Cmpe150.01 Lab+PS: Thursday 3-4-5, BM B4

- Zeynep Yirmibeşoğlu

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Lab Content: <https://github.com/zeynepyirmibes/cmpe150-spring20>

Student Assistants:

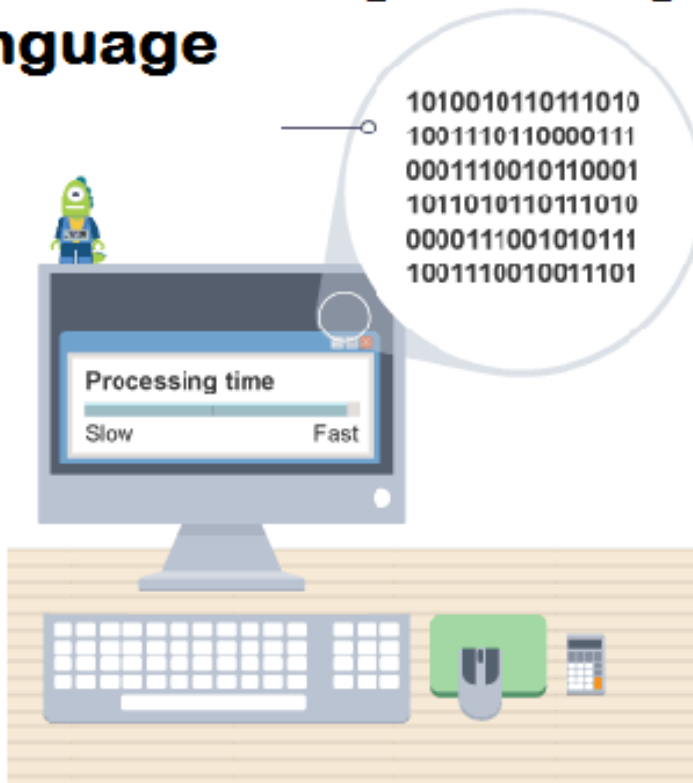
- Ömer Cihan Benzer
- Hatice Şule

Course Information

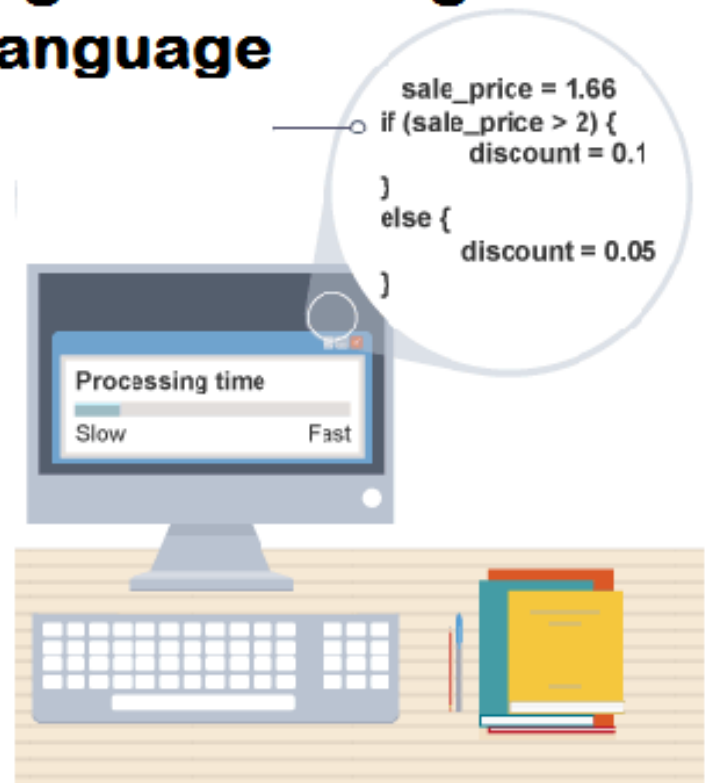
- Quizzes each week (%10)
- Midterm 1 (25%) **March 31**
- Midterm 2 (30%) **May 5**
- Final (35%)

Programming Languages

Low Level Programming Language



High Level Programming Language



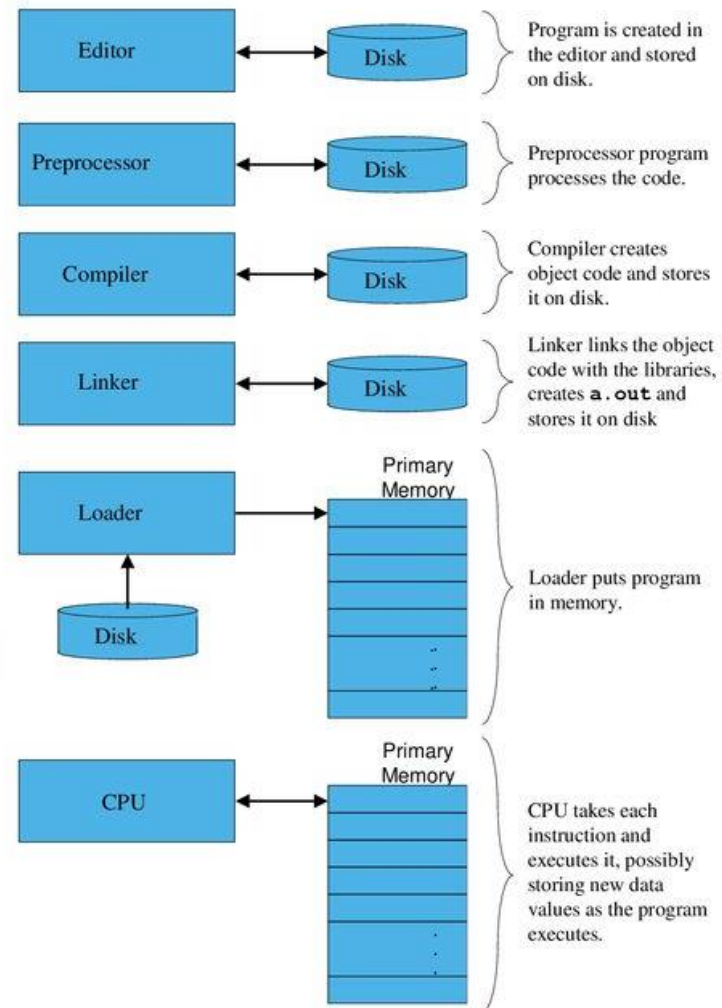
Build & Run

Build

1. Edit
2. Preprocess
3. Compile
4. Link

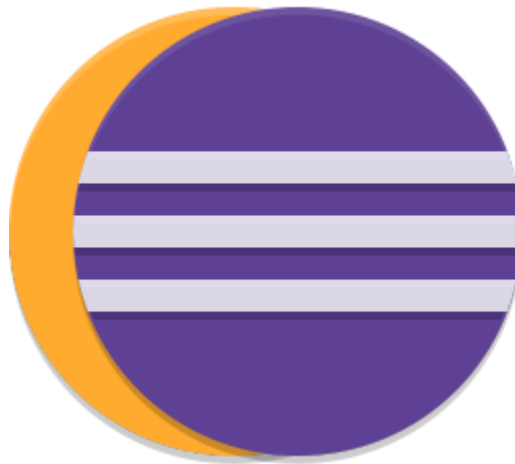
Run

5. Load
6. Execute



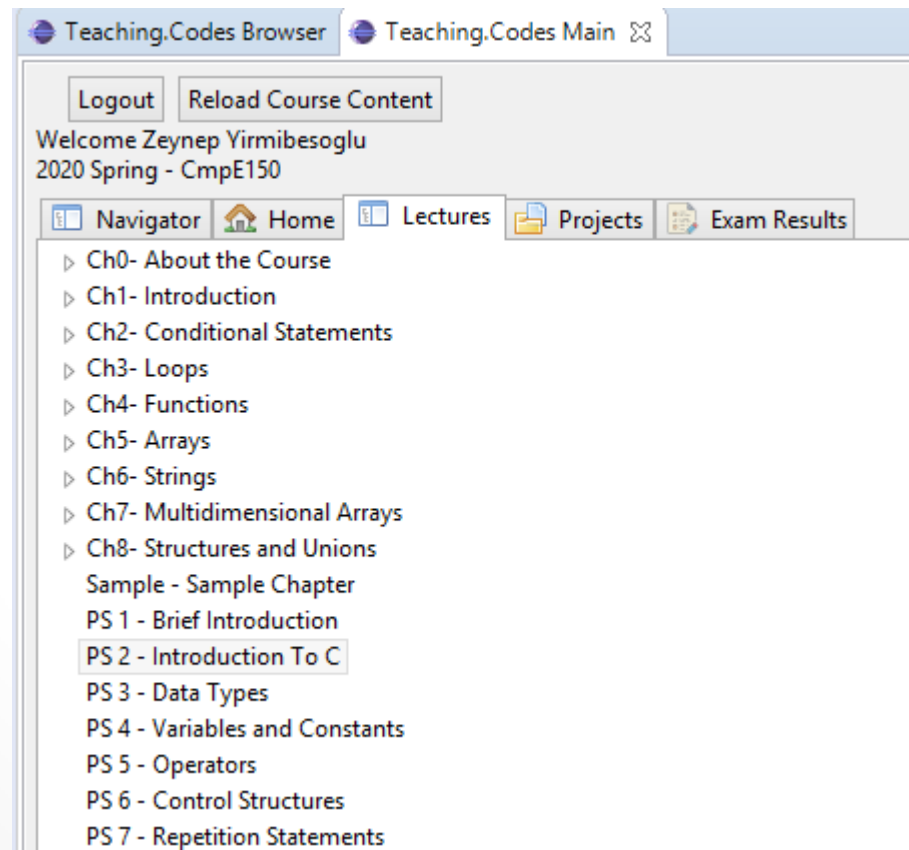
Eclipse IDE

- **IDE:** An integrated development environment (**IDE**) is a software application that provides comprehensive facilities to computer programmers for software development. An **IDE** normally consists of at least a source code editor, build automation tools and a debugger.

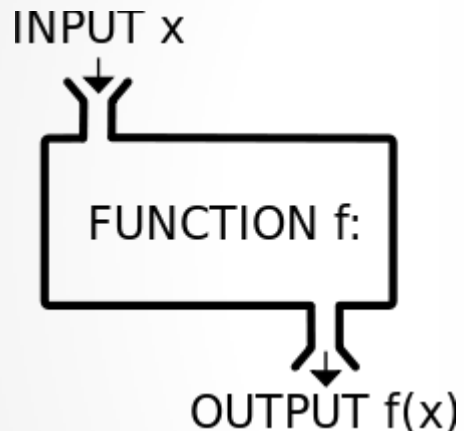


Teaching Codes

- <https://programming.cmpe.boun.edu.tr/welcome>



C Functions



Return statement of a Function

```
#include <stdio.h>

int addNumbers(int a, int b);

int main()
{
    ... ..
    sum = addNumbers(n1, n2);
    ... ..
}

int addNumbers(int a, int b)
{
    ... ..
    return result;
}
```

sum = result

Variables in C

Type	Meaning	Modifier
Character	Character data	char
Integer	Signed whole numbers	int
Float	Floating point numbers	float
Double	Double precision floating point numbers	double
Signed	Positive and negative numbers	signed
Unsigned	Positive only numbers	unsigned
Long	Double the length of a number	long
Short	Halves the length of a number	short

```
int number1;
```

```
int number2;
```

```
int number1, number2;
```


Declaration & Assignment

- Declaration:

int number1;

char character1;

- Assignment: Not a mathematical equality

number1 = 62;

character1 = 'a';

2 = x; WRONG

Memory Layout

Computer		Programmers			
Address	Content	Name	Type	Value	
90000000	00	sum	int (4 bytes)	000000FF (255 ₁₀)	
90000001	00				
90000002	00				
90000003	FF				
90000004	FF	age	short (2 bytes)	FFFF (-1 ₁₀)	
90000005	FF				
90000006	1F	average	double (8 bytes)	1FFFFFFFFFFFFFFFFF (4.45015E-308 ₁₀)	
90000007	FF				
90000008	FF				
90000009	FF				
9000000A	FF				
9000000B	FF				
9000000C	FF				
9000000D	FF				
9000000E	90	ptrSum	int* (4 bytes)	90000000	
9000000F	00				
90000010	00				
90000011	00				

Note: All numbers in hexadecimal