

LANGUAGES

PROCESSING

ASSEMBLER: TRANSLATE FROM ASSEMBLY LANGUAGE
TO MACHINE LANGUAGES

<u>ASSEMBLY*</u>	<u>VS</u>	<u>MACHINE</u>
loop: INP temp		01 0000
CLA temp		02 1000
TAC done		03 3005
JMP loop		04 8002
done: HRS		05 9000

* ASSEMBLY IS A MNEMONIC REP OF MACHINE INSTRUCTIONS
↳ ITS A ONE TO ONE REPRESENTATION OF STATEMENTS AND
INSTRUCTIONS

COMPILER: TRANSLATE FROM HIGH LEVEL LANGUAGES TO
ASSEMBLY OR MACHINE

LEXICAL ANALYZER: BREAKS UP INPUT TEXT INTO TOKENS

PARSER: IDENTIFIES STRUCTURE IN TOKEN SEQUENCE

SYMBOL TABLE: TRACKS THE DECLARATION + USE OF NAMES

INTERMEDIATE CODE GENERATOR: CREATES ALT REPRESENTATION

CODE GENERATOR: CREATES TARGET LANGUAGE CODE

OPTIMIZER: IMPROVES SPACE OR CPU USAGE OF CODE

INTERPRETER: PROCESS LANGUAGE OPERATIONS AS THEY ARE READ

MARK-UP, TYPE-SETTER, ETC.

- LESS USED FOR LOGIC + PROCESSING
- MORE USED ON CREATING DOCUMENTS

EXAMPLES

- HTML
- PDF
- POSTSCRIPT
- TEX + L^AT_EX

HTML

HYPER - **T**EXT **M**ARK - UP **L**ANGUAGE

- BASED AROUND TAGS NOT COMMANDS
- TAGS ARE ENCLOSED IN `<>`

BASIC STRUCTURE:

```
<html>  
  <head>  
    <title>...</title>  
  </head>  
  <body>  
    </body>  
</html>
```

TAGS	WHAT IT DO
<h1></h1>	SECTION HEADINGS
<h2></h2>	SMALLER HEADINGS
	START AN ORDERED LIST
	START AN UNORDERED LIST
	A LIST ELEMENT
<p></p>	A PARAGRAPH
	PLACE AN IMAGE ON THE PAGE
	PLACE A LINK ON THE PAGE
<center></center>	CENTER TEXT IN BROWSER
<table></table>	CREATE A TABLE
<tr></tr>	CREATE A ROW IN A TABLE
<th></th>	A HEADER IN A TABLE
<td></td>	A BOX IN A TABLE

PROGRAMMING

- LOGICAL BASED
- MOSTLY BASED AROUND SOLVING A PROBLEM

EXAMPLES

COBOL	C
FORTRAN	JAVA
LISP	JAVA SCRIPT
Algol	Go
PASCAL	

CLASSES: TYPES OF THINGS

OBJECTS: INSTANCES OF CLASSES

ATTRIBUTES: DATA COMMON TO CLASSES WITH UNIQUE VALUES PER OBJECTS

METHODS: FUNCTIONS THAT IMPLEMENT BEHAVIOR

INVOKING METHODS:

CONCEPTUALLY - MESSAGES SENT FROM ONE OBJECT TO ANOTHER

IMPLEMENTATION - CALLING METHODS

NOTATION - OBJECT.METHOD();

JAVASCRIPT

• METHODS + OBJECTS + DOCUMENTS

STRING

METHOD	WHAT IT DO
charAt(num)	THE CHARACTER AT THE INDEX
fontSize(num)	MAKES THE FONT A SIZE
substring(i, j)	RETURNS THE STRING AT i, j
toUpperCase()	RETURNS THE STRING w/ ALL UPPERCASE
length()	RETURNS THE LENGTH OF THE STRING

MATH

METHOD	WHAT IT DO
PI	returns pi
cos()	returns the cosine of a num
abs()	returns the absolute val of a num
pow()	returns the num to a power
sqrt()	returns the square root of a num

FUNCTIONS:-

- Usually in DOCUMENT HEAD
- STRUCTURE

function name(parameters)

{

code;

}