

Logic and Algorithms – Recitation 5

External CSS File

Last time, we went over putting `<style>` tags within the `<head>` tag to style your HTML:

```
<head>
  <style>
    h1{
      color:blue;
    }
  </style>
</head>
```

An external CSS file is essentially the same thing, but we're putting our CSS in another document, so the HTML and CSS are separated, and your code doesn't get really long. To link an external CSS file:

- 1) Create a new file with a .css extension. For example, mycss.css and save it where your .html file is.
- 2) Go into your html file, and between the `<head>` tags:

```
<head>
  <link rel="stylesheet" type="text/css" href="mycss.css">
</head>
```

** All this does is find your CSS file and load all of it into your html file.
- 3) Go into your CSS file, and add in CSS. You don't need to include any tags. Only include CSS. For example:

```
h1{
  color:blue;
}

h2{
  width:200px;
}
```
- 4) Save BOTH HTML and CSS files after any modifications.

Logic

Basic logic symbols: **logical AND** (\wedge), **OR** (\vee), **NOT** (\sim or \neg).

What is a **proposition**? A sentence that is either true or false.

Example: 'It is sunny outside' is a proposition. 'What time is it?' is not a proposition.

Symbols to sentences: Let p and q be propositions – p: it is raining outside; q: it is snowing outside. Express the following as English sentences:

$p \wedge q$: It is raining outside and it is snowing outside.

$p \rightarrow q$: If it is raining outside, then it is snowing outside.

$(p \wedge \sim q) \vee \sim p$: It is raining and not snowing outside, or it is not raining.
 $\sim p \rightarrow q$: If it is not raining outside, then it is snowing outside.

Sentences to symbols: Let r and s be the propositions – r : you are crying; s : you are laughing. Express the following as logical statements:

You are not laughing: $\sim s$






If you are crying then you are not laughing: $r \rightarrow \sim s$

You are not crying and you are not laughing: $\sim r \wedge \sim s$

You are crying or you are laughing: $r \vee s$

If you are not laughing then you are crying: $\sim s \rightarrow r$

Algorithms (flowcharts):

Symbol	Name	Function
	Start/end	An oval represents a start or end point.
	Arrows	A line is a connector that shows relationships between the representative shapes.
	Input/Output	A parallelogram represents input or output.
	Process	A rectangle represents a process.
	Decision	A diamond indicates a decision.

Example of application:

- Start the process of billing
- Order 2 burgers, 3 pizzas (input)
- Calculate the prices (process)
- If cost > \$10 give free coupon (decision box with yes); if cost < \$10 do nothing (decision box with no)
- Display the cost (output)
- End the process