CS 1025 Lecture 22.9.2015

- Ruby (Codeacademy)

- Cloud 9

-Event-driven programming

PLAN before you begin coding. Explicitly write down what you want the code to do, design it.

URL’s link to blocks of code in C9. E.g. Facebook/Rudi links to info on code on a server. Links transfer between these URLs.

In ruby, a variable with a $ sign is available for the whole program.

An object variable is more restricted, cannot be referred to everywhere.

Advanced Web Application Development

Ruby on rails

Rails is a structure built on/with ruby for web app development. Ruby on it’s own can be used for other things as well.

Model – Represents the data in the program and business logic

View (templates) – Manages the visual display of the data

Controller – provides the means for user interaction with the data

The browser sends a request for a page to the Controller on the server.

The controller gathers data and updates from the model.

Then the controller sends the render to the view, which sends it back to the browser.

SQlite3 – lightweight server less database application

Rails can support other database systems too

In the database Server:

-development

-test

-production

All of the above use SQlite3 as an adapter

Assignment

Due 6.11.2015

Learn codeacademy:

1. HTML & CSS
2. Make a website
3. Make an interactive website

WEB DESIGN

# HTML

Html page with the text “stuff” and a link to google through a clickable image.

<!DOCTYPE html>

<html>

<head>

<title> </title>

</head>

<body>

<p> <h1> stuff </h1> </p>

<a href= [www.google.com](http://www.google.com)> <img src=” image url”> </a>

</body>

</html>

## List:

<ol>

<li> “FIRST ITEM” </li>

<li> “Second ITEM” </li>

</ol>

## Bullet points:

Same as lists, but with : <ul> </ul>

## Comments

<!—Comment is here -- >

## Style: Size, colour, fontfamily, background, alignment, bold

<p style=”font-size: 20px”> TEXT HERE </p>

<p style=colour: red> TEXT HERE </p>

<p style= colour:red;” font-size: 20px”> TEXT HERE </p>

<I style=”color:red;font-family:Impacct/verdana etc”> </li>

<p style=”background-color:red;text-align:center”>too <strong> STRONG! </strong> </p>

Italize: <em> This is italized </em>

## Structures

# Tables:

<table> <tr>= table row, add more for more cells

<td> = table data, for information

<head>

<title> Table time! </title>

</head>

<body>

<table border=”1px”>

<thead>

<tr>

<td>

Name

</td>

<td>

Favourite Colour

</td>

</tr>

</thead>

<tbody>

<tr> #First Column#

<td> First Cell! </td>

<td> Second column! </td>

#A second td adds a second column!

</tr>

<tr>

<td> Second cell! </td>

</tr>

<tbody>

<body>

You can use <th colspan=”3”> to make a column 3 columns wide

<td style="padding:5px;border-left:1px solid black;">1933</td>

adds the padding and the border for the table, like excel

## DIV

<div> </div>

Make sections out of your page for styling. This is coloured

<div style="width:50px; height:50px;background-color:yellow"></div>

<span style=”font-family:Arial”> Word </span> :: Changes the attributes of one word!

CSS

CSS is either a separate file or within <style> </style> string in your html file.

You can access CSS through <span> etc, it can change the whole design of a page without changing each <style> attribute separately.

In CSS you create ‘sections’ for each element (<p>, <h2> etc)

p {

font-size: 20px ;

font-family: Arial;

}

End with ;

No need for quotes in attributes!

Ruby

Comparators:

!= not equal

>= greater or equal to

<= smaller or equal to

== equal

Boolean and logical operators also apply to ruby. Booleans are always true or false

&& and (if both expressions are correct)

|| OR (either one)

! NOT, makes true values false and vice versa

In ruby text, you don’t need to add : or ; to the ends of lines when doing else/elseif statements.

Also add ‘end’ to each code piece.

Unless: A short version of an ‘if’ statement

Problem = false

Print “Good” unless Problem

Program to change user string ‘s’ letters into ‘th’

Print “Enter String!”

User\_input = gets.chomp.downcase! ## Downcase changes string into small letters in place

Ruby Object Model

Call method on object

Method exists?

Call object’s class method

Class method exists?

Call parent’s class method

Parent’s class method exists?

Call object class method

Object class method exist?

Execute method\_missing

NoMethodError raised

If the method is not found, the code will look in the objects class, then the parent class for the method.

If the method is not specified, the code ‘gives up’ and give the method missing. However, before this the code looks at the predefined methods in the ruby language.

At this point the code will look for method\_missing itself, and goes through the whole process again.

In your code you can create a method\_missing

Class Dummy

Def method\_missing

Puts “This is a method message method”

End

End

Dummy.new.anything

Since anything is not found, the code looks for the method\_missing method

You can modify this by changing the puts:

Puts “This is a method message method called from: #{m}”

This shows which method gives you the error. Useful for error analysis etc.