

HTML: FORMS

Every time you connect to Office365, or to any other website, you use a form.

Figure 1 shows a much simple form, where you have only two inputs (a text, the login, and a password — that's also a text input that hides what you type), see Listing 1.

More complex forms use checkboxes, scrolling menus, multiple textual inputs...

For a form to be really useful, we need to learn php. When you submit a form (click on the "Submit" button or press "Enter" in a textual input), the form sends all the information you put inside to a php script, and handles it.

Figure 1: <https://sms.eurisc.eu/login>

But, before we cover php, I'd like you to try out the rendering of a form, before trying out the real interaction with user-submitted information.

```

1 <div class="msm-r-grid">
2   <div class="row">
3     <div class="col-sm-12">
4       <div class="form-group">
5         <label class="form-element-label">Email</label>
6         <input type="text" id="login_user_email" name="login[
          user_email]" required="required" value="" class="form-
          control" />
7       </div>
8     </div>
9   </div>
10  <div class="row">
11    <div class="col-sm-12">
12      <div class="form-group">
13        <label class="form-element-label">Password<a class="right"
          href="#" id="retrieve-password" tabindex="-1">recover
          password</a></label>
14        <input type="password" id="login_user_password" name="login[
          user_password]" required="required" class="form-control"
          />
15      </div>
16    </div>
17  </div>
18  <div class="row">
19    <div class="col-sm-12">
20      <button type="submit" id="login_login" name="login[login]" class=
          "btn-primary">login</button>
21    </div>
22  </div>
23 </div>

```

Listing 1: SMS Login webpage

1. First, have a look at Listing 1, which is the code that generates what you see in Figure 1.
 - (a) What is the html code that generates a textual input?
 - (b) What is the html code that generates a textual input, where the text is hidden when you type it? (each character is replaced by a *)

The image shows a complex web form for searching Magic: The Gathering cards. It is organized into several sections:

- Manas:** Filters for mana symbols (Must be part of the cost, May be part of the cost, May be multiple) and a text input for "Or type your cost".
- Colors:** Radio buttons for "At least one" (selected) and "All of them", with checkboxes for "Only these colors" and "Color ID".
- Types:** Checkboxes for various card types (Artifact, Creature, Enchantment, Instant, Sorcery, Tribal, Planeswalker, Land) and a "Special Types" dropdown.
- Options:** A checkbox for "Visual display" (checked) and "All versions".
- Text Search:** Input fields for "Card Name", "Card Type", and "Card Text".
- Mana Value:** Input fields for "Equals", "Max", and "Min", with checkboxes for "X included" (checked), "even", and "odd".
- Power:** Input fields for "Equals", "Max", and "Min", with a checked "included" checkbox.
- Toughness:** Input fields for "Equals", "Max", and "Min", with a checked "included" checkbox.
- Format:** Buttons for "Mod", "PiO", "STD", "VIN", "LEG", "Multi", and "1vs1".
- Rarity:** Checkboxes for "Mythic", "Rare", "Uncommon", and "Common".

Figure 2: <https://www.mtgpics.com/search>

2. Then, have a look at the website from Figure 2. If you inspect the source code, the form starts at line 396 (or search for `<form name=engine method=post action=results>`). You have basically everything in this form, even though the code is quite complicated (and not well indented, it's generated through php with no concern for the rendering of the html code). You can see that there are some small mistakes in the code (shown in red), but this does not alter the rendering: html is able to "forget" those mistakes and show the webpage, even though the html code is not 100% compliant with the standard.

- What html code generates a checkbox?
- What html code generates a scrolling menu?
- What html code generates a multiple choice where you can select only one answer?
- Can you explain what happens when you click on a box, on a button or on some images in this form (e.g. when you click on "All versions" or on "Planeswalker")? Where is (in the file) the code that is executed in that case?
- When you make clicks explained in the previous question, the appearance of the page changes. Is information exchanged with the server in that case? Why?

3. Now, have a look at the image from Figure 3. What bug do you see?

Hint: http://www.barsamian.am/2022-2023/S6ICTA/TP9_Handling_data_1.pdf.

4. Compare Figure 3 and Figure 4. Can you spot the main design difference that will make keyword searches on my site really different from keyword searches on the Luxemburg website? Can you guess what happens when you click on "☑"?

5. Last but not least: try to make a webpage that has the same rendering as my website on Figure 4. The "☑" image (with inverted colors, because it's on a black background) is available on:

http://www.barsamian.am/2023-2024/S7ICTA/TP3_select_all_white.png.

```

1 <form name=engine method=post action=results>
2 [...]
3 <div class=win_title>Manas</div>
4 [...]
5 <tr><td colspan=5 height=40><span class=G12>Or</span> type your cost&nbsp;&nbsp;&nbsp;&nbsp;&
&nbsp;  &nbsp; <input type=text style="width: 150px;" class=search_input
&nbsp;  &nbsp; name=exactcost value="" ></td></tr>
6 <tr>
7 <td colspan=5>
8 <select name=spe_options>
9 <option value="">Special Cards</option>
10 <option value=colorless>Colorless mana symbol</option>
11 <option value=split>Split cards</option>
12 <option value=flip>Flip cards</option>
13 <option value=dfc>Double-faced cards</option>
14 <option value=hyb>Hybrid monocolored mana cost</option>
15 <option value=phy>Phyrexian mana cost</option>
16 <option value=time>Timeshifted cards</option>
17 <option value=historic>"Historic" cards</option>
18 </select></td>
19 </tr>
20 [...]
21 <div class=win_title>Colors</div>
22 [...]
23 <td colspan=6>
24 <div class=search_item style="display:inline-block;" id=
&nbsp;  &nbsp; color_searchBox1 onClick="CocheRadio('1','color_search')"><input id
&nbsp;  &nbsp; =color_search1 type=radio name=color_search value=1> At least one</
&nbsp;  &nbsp; div>
25 <div class=search_item style="display:inline-block;" id=
&nbsp;  &nbsp; color_searchBox2 onClick="CocheRadio('2','color_search')"><input id
&nbsp;  &nbsp; =color_search2 type=radio name=color_search value=2> All of them</
&nbsp;  &nbsp; div>
26 <br>
27 <div class=search_item style="display:inline-block;" id=color_only
&nbsp;  &nbsp; onClick="Coche('','color_only')"><input type=checkbox name=
&nbsp;  &nbsp; color_only value=1> Only these colors</div>
28 <div class=search_item style="display:inline-block;" id=color_ID
&nbsp;  &nbsp; onClick="Coche('','color_ID')"><input type=checkbox name=color_ID
&nbsp;  &nbsp; value=1> Color ID</div>
29 </td>
30 [...]

```

Listing 2: Mtgpics Advanced Search webpage

Bac and Prebac Database

Search The Question Database

See which exams have been uploaded

Note: If the question has not been uploaded in the language requested, an English version will appear.

Keyword search

Exam: AND AND

Topic:

- Analysis
- Rational
- Exponential
- Logarithmic
- Trigonometric
- Quadratic
- Cubic
- Limits
- Derivative Graphs
- Continuity
- Differentiability
- Differential equations
- Differentiation
- Tangents
- Integration
- Area
- Volume of Revolution
- Probability
- Tree Diagrams
- Combinations
- Conditional
- Bayes
- Binomial
- Contingency
- Normal
- Geometry
- Conics
- Circles of Intersection
- Spheres

Search by Exam and Lang **Search by Year and Lang** **Search by Year and Exam and Lang**

Exam: Year: Year: Exam:

Lang: Lang: Lang:

English
 français
 Deutsch
 Czech
 dansk
 eesti
 Greek
 Espagnole
 Finnish
 Hungarian
 italiana
 Latvian
 Lithuanian
 Nederlands
 Polish
 Portuguese
 Slovak
 Slovenian
 svenska

Figure 3: Luxemburg European School (was only up to 2010, not online anymore)

European School B Tests Database

Search exercises inside the database

[See the list of all exams in the database](#)

Levels (European Schools)	Levels (French System)	Languages
<input type="checkbox"/> S4P4 <input type="checkbox"/> S5P4 <input type="checkbox"/> S4P6 <input type="checkbox"/> S5P6 S6P3 <input type="checkbox"/> (Old) <input type="checkbox"/> (New Syllabus) S6P5 <input type="checkbox"/> (New Syllabus) S7P3 <input type="checkbox"/> (Old) <input type="checkbox"/> (New Syllabus - Sample Exams) S7P5 <input checked="" type="checkbox"/> (New Syllabus - Sample Exams)	<input type="checkbox"/> Term. ES (Economy Social) Technological tool <input type="checkbox"/> With <input type="checkbox"/> Without	<input type="checkbox"/> Spanish <input type="checkbox"/> Czech <input type="checkbox"/> French <input type="checkbox"/> Polish <input type="checkbox"/> English <input type="checkbox"/> Danish <input type="checkbox"/> German <input type="checkbox"/> Hungarian <input type="checkbox"/> Italian <input type="checkbox"/> Dutch
<input checked="" type="checkbox"/> Algebra	<input checked="" type="checkbox"/> Analysis	<input checked="" type="checkbox"/> Geometry
<input type="checkbox"/> Square roots <input type="checkbox"/> Powers, Sci. notation <input type="checkbox"/> Proportionality, Linearity <input type="checkbox"/> Equations <input type="checkbox"/> Rational numbers <input type="checkbox"/> Special ids., Pascal triangle <input type="checkbox"/> System of equations <input type="checkbox"/> Polynomials <input type="checkbox"/> Quadratic equations <input type="checkbox"/> Trigonometric equations <input type="checkbox"/> Exponentials <input type="checkbox"/> Logarithms <input type="checkbox"/> Prime numbers <input type="checkbox"/> Sequences: arith. / geo. <input type="checkbox"/> Sequences: other <input type="checkbox"/> Complex numbers <input type="checkbox"/> Multiple choice (MCQ)	<input type="checkbox"/> Linear functions <input type="checkbox"/> Graph of a function <input type="checkbox"/> Images and inverse images <input type="checkbox"/> Variations, Extremums <input type="checkbox"/> Quadratic functions <input type="checkbox"/> Polynomial functions <input type="checkbox"/> Periodic functions <input type="checkbox"/> Exponential functions <input type="checkbox"/> Logarithmic functions <input type="checkbox"/> Limits, Asymptotes <input type="checkbox"/> Derivatives, Tangent lines <input type="checkbox"/> Primitives, Integral calculus <input type="checkbox"/> Area under the curve <input type="checkbox"/> Functions of 2 vars. <input type="checkbox"/> Composite functions <input type="checkbox"/> Multiple choice (MCQ)	<input type="checkbox"/> Pythagoras theorem <input type="checkbox"/> Trigonometric ratios <input type="checkbox"/> Circles <input type="checkbox"/> Enlargement / reduction <input type="checkbox"/> Intercept theorem (Thales) <input type="checkbox"/> Vectors: coordinate system <input type="checkbox"/> Radians <input type="checkbox"/> Trigonometric formulae <input type="checkbox"/> Vectors: scalar product <input type="checkbox"/> 3d geometry <input type="checkbox"/> Area computation <input type="checkbox"/> Volume computation <input type="checkbox"/> Parametric equations <input type="checkbox"/> Multiple choice (MCQ)

Figure 4: http://www.barsamian.am/mathsexams/adv_search.php: Maths Exams given at the European Schools