Web applications and multimedia technologies

Lecture № 1

Introduction

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Discipline volume and kinds of study

<table>
<thead>
<tr>
<th>Type of educational work</th>
<th>Total hours</th>
<th>Modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class hours (total)</td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>Including:</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>Lectures</td>
<td></td>
<td>56</td>
</tr>
<tr>
<td>Practical training (PT)</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>Laboratory work (LW)</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Independent work (total)</td>
<td>28</td>
<td>53</td>
</tr>
<tr>
<td>Including:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homework</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hours</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>Total labor</td>
<td></td>
<td>211</td>
</tr>
</tbody>
</table>
Thematic plan and the content of the discipline. Module 1:

- Introduction and basic concepts of web applications
- Pages and Frames. HTML5, CSS3.
- Technologies of web applications development
- A simple adaptive static site development.
Module 2:

• Basic syntax and functions of PHP.
• Working with SQL statements in PHP, work with the database.
• Software for the development of complex web applications.
• Administration and adaptation of Content Management Systems (CMS) on the example of WordPress.
• Frameworks and their applications in various network projects.
• Screen-adaptable web applications.
Module 3:

• Working with the audio and video streams
• Broadcast on the Internet, compression, and control of broadcast quality.
• Automation of video processing, video graphics design live online.
• Integration of video services in internet projects.
• Project work and practice. Workflow Management. Case studies.
Knowledge Control

• The weighting factors:
  • *Theoretical* course in cumulative assessment: 20% ($K_t = 0.2$)
  • *Homework*: 60% ($K_h = 0.6$)
  • *Exam*: 20% ($K_e = 0.2$)

• The final grade is calculated as follows:

$$G = K_t \times G_t + K_h \times G_h + K_e \times G_e$$
References (en) (1 module)
References (en) (2 module)
References (ru) (1,2 modules)

- Фрэйн Б. HTML5 и CSS3.Разработка сайтов для любых браузеров и устройств. Изд. Дом «Питер», 2013. 304 с.
- Дронов В.А. HTML 5, CSS 3 и Web 2.0. Разработка современных Web-сайтов. BHV, 2011

• + Интернет (ru) (en)
## Difference between a web site and a web application

<table>
<thead>
<tr>
<th>Site</th>
<th>Web applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>a web site consists of a <strong>static content</strong> repository that's dealt out to all visitors,</td>
<td>while a web application <strong>depends on interaction and requires programmatic user input and data processing.</strong></td>
</tr>
</tbody>
</table>
For example

| a news site would be a "website", | but a spreadsheet or a collaborative calendar would be web "applications". |

In computing, a **web application** or **web app** is a **client-server software application** in which the client (or user interface) **runs** in a **web browser** (Wiki)
Internet as a media and repository of websites and web applications

Internet is *popular* media and has *free* access
Top 10 countries in Europe...

Internet World Stats 2012-2014
15 sites Top

- Яндекс: 56%
- Mail.ru: 55%
- Vk.com: 50%
- Google (ru+com): 44%
- Youtube.com: 42%
- Odnoklassniki.ru: 39%
- Wikipedia.org: 29%
- Avito.ru: 24%
- Facebook.com: 22%
- Gismeteo.ru: 16%
- LiveJournal.com: 15%
- Aliexpress.com: 15%
- Blogspot (com+ru): 14%
- Kinopoisk.ru: 13%
- Rambler: 12%
Internet – media (means of information delivery)

1 - January-June 2013, bln. Rub., VAT
2 - January-June 2014, bln. Rub., VAT
3 - Change% '14 to '13

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising Market</td>
<td>155.2</td>
<td>164.5</td>
<td>6</td>
</tr>
<tr>
<td>Television</td>
<td>75.6</td>
<td>78.7</td>
<td>4</td>
</tr>
<tr>
<td>Radio</td>
<td>7.4</td>
<td>7.8</td>
<td>6</td>
</tr>
<tr>
<td>Press</td>
<td>18.8</td>
<td>16.9</td>
<td>-10</td>
</tr>
<tr>
<td>Outdoor advertising</td>
<td>20.0</td>
<td>20.0</td>
<td>0</td>
</tr>
<tr>
<td>Other media</td>
<td>2.2</td>
<td>2.1</td>
<td>-4</td>
</tr>
<tr>
<td>Internet</td>
<td>31.1</td>
<td>38.0</td>
<td>22</td>
</tr>
<tr>
<td>-media advertising</td>
<td>7.8</td>
<td>8.0</td>
<td>3</td>
</tr>
<tr>
<td>-contextual advertising</td>
<td>23.4</td>
<td>30.0</td>
<td>28</td>
</tr>
</tbody>
</table>
RAEC: advertising and marketing (digital), bln. Rubles.

- Banner advertising: 19.2 bln. Rubles
- Video advertising: 1.7 bln. Rubles
- Contextual advertising: 37.6 bln. Rubles
- Search Engine Optimization: 10.2 bln. Rubles
- Marketing and communication in social networks: 4.7 bln. Rubles
- Web development: 12.3 bln. Rubles
Most popular WA (examples)

- Development
  - Web site development and design
  - Application Development
- Telecommunications
  - Web hosting
  - Providing access
- Search Engine Optimization
- Content selling
  - Music
  - Video
- Paid access
- Paid services
- E-recruitment...
The distribution by age and gender
Devices with which people enter to the Internet

1. PC
2. A laptop
3. Smartphone
4. The tablet
5. Cellular telephone
6. TV (Smart TV)
7. Game consoles and so on.

Adaptive sites and Web applications are necessary
Mobile Internet

- Social networks: 47%
- Search for information: 47%
- News, sports, weather: 46%
- E-mail: 39%
- Listen to and download music: 35%
- Maps / Navigator: 30%
- View and download video and images: 26%
- Download applications (except gaming): 25%
- Download games: 21%
- Community (forums, blogs, etc.): 18%
- Online games: 16%
- Other: 13%
TV is in the first place, Internet - on the second place (Media competition)

![Graph showing the percentage of media consumption from 2006 to 2014.](image)
The recipe for a successful media (WA):

- Select the liquidity target audience
- To write the best texts
- Show the best pictures and videos
- Make the best layout and navigation
- Use the best advertising formats
- Use the best analytical services and see the behavior and reaction of the audience
- Choose the best Seller
- Build your own sales
The recipe for a successful service:

• Select an unmet need
• Create an unique satisfaction technology
• Satisfying and raise the audience
• Explore the adjacent supply and to develop cross-selling
• To become a leader in its niche
Task 1

• Invent or choose a theme of site or Web application for diploma or future online business
Thank you for attention!