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| [[https://myetudes.org/etudes-melete-tool/images/printer.png](https://myetudes.org/portal/tool/4c4d3792-8b10-40ce-8016-d7a5ac569a1c/print_module.jsf?printModuleId=1436385333) Send to Printer](https://myetudes.org/portal/tool/4c4d3792-8b10-40ce-8016-d7a5ac569a1c/print_module.jsf?printModuleId=1436385333) | [Close Window](https://myetudes.org/portal/tool/4c4d3792-8b10-40ce-8016-d7a5ac569a1c/print_module.jsf?printModuleId=1436385333) |
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| 22. Mobile Platforms  22.1. Web Applications vs Native Applications  *Copyright (c) 2014, Rula Khayrallah*  On mobile platforms, users have access to two main categories of applications.  **Native applications** live on the mobile device and are installed through an app store. They are**developed specifically for one platform**, and can take advantage of the device features.  **Web applications are available through a browser**. Users first access them through a web address and then have the option to install them on the home screen.  22.2. Special Considerations  *Copyright (c) 2014, Rula Khayrallah*  From a user’s perspective the distinction between mobile web applications and native applications is anticipated to become more blurred, as mobile browsers gain direct access to the hardware of mobile devices (including accelerometers, GPS and possibly cameras), and the speed and capabilities of browser based applications increase.  However there are still some issues surrounding the use of web applications on mobile platforms.  Here are some of them:  **The small screen size** represents some usability challenges.  To remedy that, web applications can offer a scaled-down version optimized for small screens. This can be achieved through the use of CSS3 media queries and other Responsive Web Design (RWD) techniques (sizing images in relative units, etc.)  With these techniques, we can use the same code to present content at its best on the device on which it is being viewed.  **The data connection** speed will usually be slower on mobile devices.  As a result, it is important for mobile web applications to **minimize the amount of data that the user has to download.**  This can be achieved by reducing the number of files that have to be served as well as **keeping the sizes of these files smaller**.  We may want to reconsider the use of images and take full advantage of CSS3 features and HTML5 elements such as canvas to generate images instead of downloading them.  For the images we download, it is important to keep their size  as small as possible.  After all, they will be displayed on a smaller screen.  The use of the **application cache** becomes essential when dealing with mobile devices.  We have seenhow the application cache allows us to have web applications available offline, when the device does not have internet access.  It is also useful when data access is slow.  Finally, it is a common practice to ‘minify’ JavaScript code as well as syle sheets.  **Minification** removes all comments and unnecessary white space characters from a file to reduce its size. |  |