

CS 411 Crystal Software Requirements

Blackboard Archive Extractor

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3. Specific Requirements

3.1. Functional Requirements

- 3.1.1. Graphical User Interface. When the application is launched with no command line arguments, the graphical user interface will be displayed.
 - 3.1.1.1. GUI “file to extract” control. The application’s GUI will have a control which allows the user to specify the location of a Blackboard Course Archive to extract.
 - 3.1.1.2. GUI “location to extract to” control. The application’s GUI will have a control which allows the user to specify the location to which the application will extract the content of the Blackboard Course Archive.
- 3.1.2. Command Line Arguments. When the application is launched with two command line arguments, the arguments will be interpreted as the following:
 - 3.1.2.1. The first command line argument will be treated as the file path to the location of the archive to extract.
 - 3.1.2.2. The second command line argument will be treated as the file path to the location at which the archive specified in command line argument 1 will be extracted.
- 3.1.3. HTML Content Pages. The application will extract the content of given Blackboard Course Archive as a series of HTML web pages.
 - 3.1.3.1. Each page will represent the content that can be found within a top level section of the original Blackboard Course for the given Blackboard Course Archive.
- 3.1.4. HTML Index Page. The application will create an HTML index page to index the web pages created in requirement 1.1.5.
 - 3.1.4.1. The links in the HTML index page will match the top level links in the Blackboard Course relating to the given Blackboard Course Archive.

- 3.1.5. Manifest XML parser. The application will build the HTML index page based on the top level links found in the manifest file of the given Blackboard Course Archive.
- 3.1.6. Resource XML parser. The application will build the HTML content pages based on the resource ~~xm+~~XML files and their relation to the manifest.
- 3.1.7. File management. The application will move files such as pdfs, powerpoints, and images from the archive to that they can be accessed from the website.
- 3.1.8. HTTP Link Validation. The application will validate the availability of any HTTP links that reference locations outside of the blackboard course.
 - 3.1.8.1. Any links to websites which are no longer available, which return HTTP 400 response codes, will be marked as “dead” and displayed as such on the output website.
 - 3.1.8.2. Any links which are still available will be hyperlinked on the website.

3.2. Assumption

- 3.2.1. The user provides a valid Blackboard Archive file.
 - 3.2.2. If the user fails to provide a valid Blackboard Archive, an error message will be displayed on the screen.

3.3. Non-Functional Requirements

3.3.1. Maintainability

- 3.3.1.1. The architecture of the application will allow support for future versions of blackboard. Features introduced in future updates may not be compatible with the Blackboard Archive Extractor prototype.
- 3.3.1.2. The Blackboard Archive Extractor prototype will not receive any updates following the completion of the application.