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Original Research Article

**Research and Capstone Project
Electronic Repository**

ABSTRACT

Aims: Higher Education Institutions are challenged to manage research and capstone projects output available through open access is something that is increasingly mandated by funders and universities in many countries.

Study design: This is to widen the dissemination of results to the community which information technology practices and theory can address.

Place and Duration of Study: This project tries to investigate the possible outcomes by developing an online repository for research and capstone project in Southern Philippines Agri-Business and Marine and Aquatic School of Technology that can deposit students output, register various accounts, log transactions and an interactive website.

Methodology: Innovative research approach is being manifested in the development that uses modified waterfall, white-box testing and survey-type methodologies are being highlighted.

Results: The website is successfully developed with specific functionality on refencing, data storage, data security, data extraction and some special functionalities. The fifty evaluators gave very agreeable results to the reliability, functionality and usability of the website.

Conclusion: Although, the system is functional and evaluated very agreeable to the respondents the testing is very crucial that proper monitoring should be in placed in the entire plan.

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Keywords: Research Repository, Innovative Research, eXtreme Programming

1. INTRODUCTION

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Making publications available through open access is something that is increasingly mandated by funders and universities in many countries (Francke, et. al., 2017). An electronic thesis repository provides several instruction-based opportunities to advance learning. For example, courses within an honors college often enroll students from a variety of disciplines. In research methods courses, students can easily examine examples of thesis to familiarize themselves with the writing styles and formatting in their discipline.

Similarly, in a colloquium-style course that addresses diverse topics, students can use the repository to become familiar with research approaches and writing styles outside of their discipline; this is a particular advantage for undergraduates because, as they progress in their course of study and certainly once they begin graduate or professional programs, they rarely have time for this type of cross-disciplinary interaction (Levy, et al., 2012). The repository mentioned is a bank of network accessible database of researches or capstone project, with a set of services to capture, store, index, preserve and disseminates an

32 institution's scholarly output in digital format. It is a new model for storing the research output
33 of a given institution(Murugathas, 2017). An institutional repository is a digital archive of the
34 intellectual product created by the faculty, research staff, and students of an institution and
35 accessible to end users both within and outside of the institution with few if any barriers to
36 access (Crow, 2002).

37

38 The Information Technology students in SPAMAST are making a capstone project for the
39 requirements before graduation. School capstone project hard copies are very important, but
40 some of these are missing after borrowed & used as references by incoming fourth-year
41 students for their capstone preparation.

42

43 The develop Research and Capstone Projects Electronic Repository for references will allow
44 end-users to browse and secure all the data stored in the electronic repository by the
45 registered user including students, faculty, and guest. The student can browse journal
46 references that provide a variety of resources that can be the basis for the upcoming study.
47 The major characteristics of this developed website basically can build electronic document
48 storage that is reliable, functional and usable.

49

50 **1.1 The Problem**

51

52 This study sought to developed a Research and Capstone Project Electronic Repository that
53 aims to provide the research and capstone references for students, faculty, and staff in
54 SPAMAST. Specifically, to investigate on the process in developing Research and Capstone
55 Projects Electronic Repository that can store data references, electronically, and browse
56 using generic references. Secondly, document the development of a login page that can
57 identify duplication of user entries, and invalid username and password verification. Then,
58 record the development of a page that has a search engine and displays different category
59 such as research papers and capstone projects titles, and display suggestion of advisers
60 based on specific topic or study. Also, document the development of a page that can add
61 and display comments. In addition, record the development of a page in the system for the
62 admin that has user logs, Finally, evaluate the level of performance of the system in terms of
63 reliability, functionality, and usability when tested with students, faculty, guest, and
64 administrator.

65

66 **1.2The Significance**

67

68 Results of this study provides an electronic repository for restoring journal references that
69 can help the students or the faculty browse the references conveniently. Also, helps secure
70 and store reliable documents.

71

72 This website has the same relevance to students in providing electronic repository used for
73 research and capstone project for retrieval of information purposes. Also, the said website is
74 useful and helpful for all the students and faculties as it serves as basis or guidelines in
75 creating research and capstone projects.

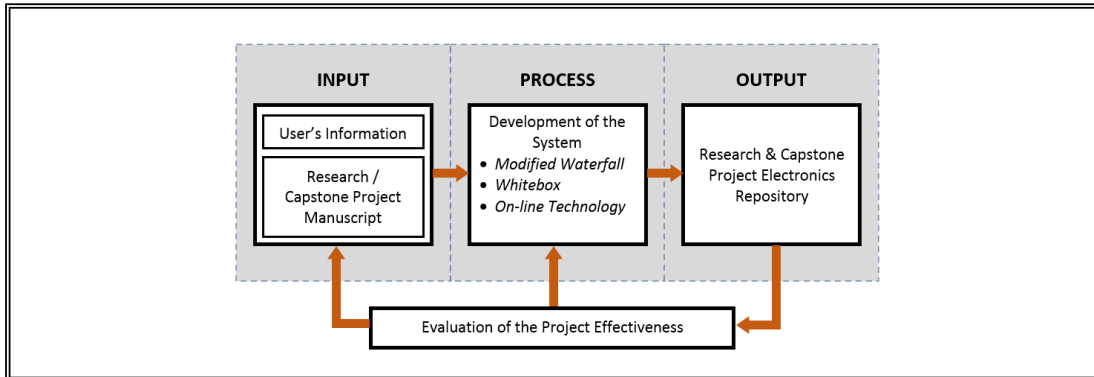
76

77 **1.2The Conceptual Framework**

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79 This study followed the input-process-output model to understanding and explaining team
80 performance. Typically describes the general structure of a system specifying the input-
81 process-output is important to determine the effectiveness of the functionality in each
82 individual component. Similarly, the IPO model has a causal structure, in that outputs are a
83 function of various group processes, which are in turn influenced by numerous input

84 variables (Hackman, 1987). The modified framework of the study is illustrated in the figure
85 below.
86



87
88

89 **Fig. 1 Conceptual Framework of the Project.**

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91 **2. METHODOLOGY**

92

93 Presented in part are the research design, research locale, population and sample, research
94 instrument, data collection and statistical tool. The software development approaches used
95 are also discussed in details with the analysis of the specifications of the entire project.
96

97

97 **2.1 Research Locale**

98

99 This study is conducted at Southern Philippines Agri-Business and Marine and Aquatic
100 School of Technology, Mati, Digos City. The researcher selected SPAMAST Digos Campus
101 as its project locale so that it can easily be tested. This is also the venue for the institution to
102 level-up in terms of publication because the technology is still not available.
103

104

104 **2.2 Research Design**

105

106 The research design refers to the overall strategy that you choose to integrate the different
107 components of the study coherently and logically (Labaree, 2009) investigated which this
108 study used innovative research design. According Takhar-Lail and Ghorbani that innovation
109 is the process of both generating and applying creative ideas in the project that can be
110 applied to a research method or system. The highlighted recommendation in the study are
111 the two stages in the process of innovation. The invention that consists of idea generation,
112 idea evaluation and opportunity recognition specifically creativity. The exploitation that
113 consists of development and commercialization mainly innovation. Therefore, it is best for
114 the study to adopt such design to extract the complete result (Fields, 2014).
115

116

117 This study conducted by describing the performance of the website that data is obtained
118 through survey method. The researcher used a modified-questionnaires in obtaining
119 responses from the subjects that fits to the objective of the study. The survey tries to
120 ascertain the Research and Capstone Projects Electronic Repository in SPAMAST.
121

122

123 The following are the strategies use in this study is based on the framework and procedure.
124 The extreme programming (XP) is an iterative and incremental process which is best to use
in this project because the indicators included in this method are cost, time, quality and
scope which is relevant to the researcher. This method is best because during XP projects

125 every team member learns a lot and in fact one of the key benefits of XP lies in the
126 distribution of knowledge throughout the team (Dudziak, 2000).

127

128 The system design helps in specifying system requirements and helps in defining the overall
129 system architecture. The website layout for Research and Capstone Project Electronic
130 Repository is the process of planning and creating a website.

131

132 The testing phase of the system determines whether the software meets the requirements of
133 the projects. White box testing is also known as structural testing or code-based testing. This
134 method of testing not only verifies a code as per the design specifications (Rongala, 2015).

135

136 **2.3 System Design**

137

138 In this, the system design helps in specifying system requirements and helps in defining the
139 overall system architecture. The website layout for Research and Capstone Project
140 Electronic Repository is the process of planning and creating a website.

141

142 The system requirement defines the needed information, function, performance and
143 interfaces that establish the components for building the system. The system requirement
144 defines the needed information, function, performance and interfaces that establish the
145 components for building the system. Included in the technologies to be used are the software
146 and hardware needed in creating the project.

147

148 The hardware device used for developing and browsing the website is a the commonly used
149 laptop because its handy and convenient. The software used in this study are the commonly
150 used by junior development. Microsoft Visual Studio 2012 used in designing and developing
151 a website or system, it also uses to design he developer used this software for the back-end
152 of the project, in which it responsible for the codes and also for the whole environment of the
153 project. MySQL Administrator used to structure the database of the website and Adobe
154 Photoshop 2012 used in editing the images used the website.

155

156 For the implementation of the project, it includes the components, modules, and data for a
157 system to satisfy specified requirements. The system needs to have a domain to fully access
158 the website through internet since it is Online but users are exclusive in SPAMAST only. The
159 domain hosting is One Thousand two hundred pesos only (Php 1,200.00) purchased online.

160

161 This study provides a use case diagram to describe the steps or actions between a user's
162 and a website which leads the user towards something useful. The use case diagram
163 focuses on describing how to achieve goal or task. The administrator is the authorized
164 person the right to fully access the entire website.

165

166 Also, the dataflow diagram shows all the information, functionalities and events of the
167 System. It represents the flow of data through an information system and modelling its
168 process aspects. It can be also the basis for visualization of data processing and shows
169 what kind of information will be input to and output from the system.

170

171 **2.4 Data Gathering**

172

173 In gathering data, it talks about the reliability, functionality and usability of this capstone
174 project Research and Capstone Projects Electronic Repository. The system reliable, if it is
175 free from bugs and errors, functional when the system is responsive; and usability if the
176 system is good enough.

177

178 The total data gathered from descriptive survey questionnaires are used as the basis for the
179 interpretation that aid to solve problems, recognize several factors that affect the structures
180 and features of the development of the system.

181

182 The data gathering first is to asked permission for the evaluation of the system. Request
183 letter of permission is secure to instructors and approved with the approval of the
184 department chairman. The team briefs and orient the respondents on how to use the system.
185 Then, gives an adequate time to operate the system to test the functionalities and indicate
186 their responses on the rating sheets. Rating sheets is retrieved after respondents answered
187 all the questions in the survey. Finally, the results is evaluated and tabulated for further
188 discussion in the document.

189

190 **2.5Statistical Tools**

191

192 The response on the questionnaire and evaluation were consolidated and tabulated. In the
193 analysis and interpretation of the data, the values were summarized through the summation
194 of all scores given by the evaluators and divided by the total number of evaluators. The
195 weighted mean was used to describe the impact of the system on the evaluators as
196 calculated using the expression.

197

198 **3. RESULTS AND DISCUSSION**

199

200 This part presents the result and discussion of the entire project in developing and
201 evaluating the Research and Capstone Projects Electronic Repository. This part of the study
202 discusses the (1) development of the system, (2) security features of the system, (3) search
203 engine capacity of the system, (4) interactive features of the system, (5) data management
204 of the system, and (6) performance of the developed system.

205

206 The developer uses software tools to meet the specific objective in creating the Research
207 and Capstone Projects Electronic Repository. The system was developed according to the
208 specific output which is searchable in the browser using the domain name. Domain name is
209 the address where Internet users can access your website. According to Franke state that
210 making publications available through open access is something that is increasingly
211 mandated by funders and universities in many countries (Francke, et.,al 2017). In developing
212 this project need to have this software component which is the domain to fully access the
213 website through internet since it is Online. First step to have it, is to register on site which
214 deals a domain and payable through bank account of the company, upon registering input
215 the possible username and password for the control panel security, second upon receiving
216 the domain name the company send the link and ready to use the control panel contents the
217 upload develops project.

218

219 In this, the developer applied CSS (Cascading Style Sheet) used to format the layout of Web
220 pages. They can be used to define text styles, table sizes, and other aspects of Web pages
221 that previously could only be defined in a page's HTML.PHP language stands for (Hypertext
222 Preprocessor) is an open source, server-side, scripting language used for the development
223 of web applications. By scripting language, we mean a program that is script-based lines of
224 code written for the automation of tasks. phpMyAdmin is a free and open source
225 administration tool for MySQL and MariaDB. As a portable web application written primarily
226 in PHP, it has become one of the most popular MySQL administration tools, especially for
227 web hosting services. Bootstrap framework is built on HTML, CSS, and JavaScript (JS) to
228 facilitate the development of responsive, mobile-first sites and apps.

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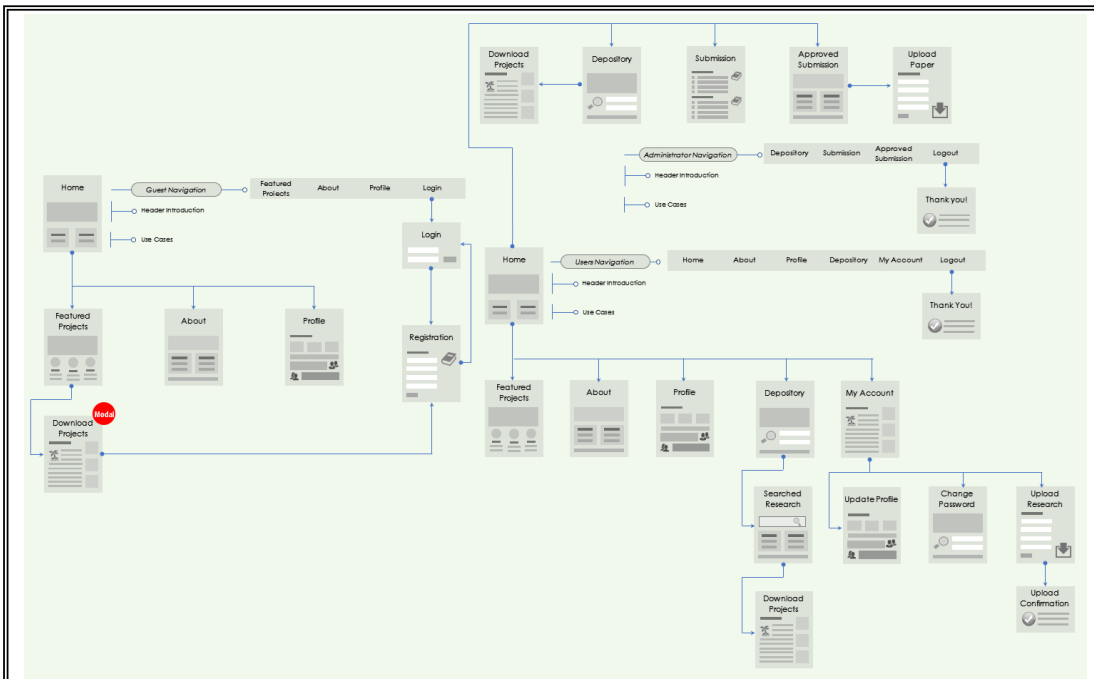
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Fig.2 Display of the Developed Website.

234 Webpage map diagram shows the entire plot of the web that describes and illustrates the
235 behavior inside the application. The guest account is included as to makes clear on the
236 access of the non-member to the entire web application. The user and administrator
237 accounts are clearly connected to give more emphasis in the difference of the two users.
238 The user is also classified to have the same access though they are students of faculty so
239 the classification is user.

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Each of the users has different menu navigation that provides them the access to each of
the page. Clear enough that separating the users account access is one way to develop a
web that has a characteristic that separates entirely the users so that conflicts of functions
will be eliminated. The table below shows the accessibility of each users.



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Fig.3 Website Map Diagram.

250 **3.1 Development of Referencing Module**

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252 Developing module for referencing that provide variety of resources that can be the basis for
253 the upcoming study. This website can build electronic document storage that is reliable.

254

255 **3.1.1 Electronics Data Storage**

256

257 The develop Research and Capstone Projects Electronic Repository for references allows
258 end-users to browse and secure all the data stored in the electronic repository by the
259 registered user including students, faculty, and guest. The student can browse journal
260 references that provide variety of resources that can be the basis for the upcoming study.
261 This website can build electronic document storage that is reliable. According to Muragathas
262 state that repository is a network accessible database, with a set of services to capture,
263 store, index, preserve and disseminates an institution's scholarly output in digital format. It is
264 a new model for storing research output of a given institution (Muragathas, 2017).

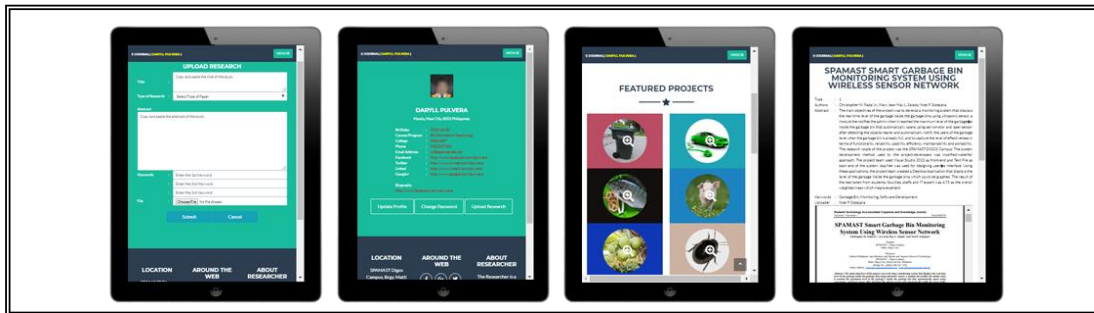
265

266 **3.1.2 Development of Generic Referencing**

267

268 Research and Capstone Project Journal uploaded by the users will serve as basis or
269 guidelines in creating a research and capstone projects converted in PDF. PDF (Portable
270 Document Format) is a file format that has captured all the elements of a printed document
271 as an electronic image that you can view, navigate, print, or forward to someone else.

272



273

274

275 **Fig.4 Screen Shots for the Output of the Referencing Module**

276

277 **3.2 Development of Login Page Module**

278

279 The login page module consists of a username and password for security measure designed
280 to prevent unauthorized access to confidential data. When attempting to log into a system,
281 the usernames and passwords entered by the potential user are compared with data
282 contained in special databases on the system.

283

284 **3.2.1 Check Duplication User Entry**

285

286 The user needs to sign up before accessing the entire website. Sign up for the information of
287 the users also requires username and password for the verification and to compare if it has
288 the same users.

289

290 To register an account, user must fill-up the registration and submit with complete
291 information. The username must be unique and must not have duplication to the existing
292 user account. The most important information is the email address thus it is a must to
293 validate the registration through email. Clicking the link provided through automatic system

294 generated link sent to active email address to confirm the registration of the account. After
295 doing the said procedure authorization to log-in to the website and enjoy the functionality is
296 being granted.
297

```
1$query = "SELECT * FROM <table name>WHERE email='$email'";  
2$result = mysqli_query($db, $query);  
3if(mysqli_num_rows($result) >0){  
4    array_push($errors,"EmailExist!");  
5  
6if(count($errors) == 0){  
7    <statements for saving the information &  
8    sent link validation code>}  
9
```

Annotations in the code:
- A red arrow points from the text "user for username" to the variable "\$email" in line 1.
- A red arrow points from the text "Username for user" to the variable "\$result" in line 2.

298 Developed code above used in checking the duplication of email address and username
299 entry to the registration page for user account. The array "array_push" accepts error data for
300 display. At an instance the array is null, the email address and username are available or not
301 taken. The red arrow with read label illustrates that when checking for username copy line 1
302 to 4 then change the name of the entity comparison that would fit to the desired datatype to
303 compare. Also, for the error handling text to push in the array and to display in the error
304 page. The green text is statement or label of a specific variable for modification. Finally, the
305 statement for saving the information & sent link validation code are developed syntax code
306 used in validating the account through email.
307

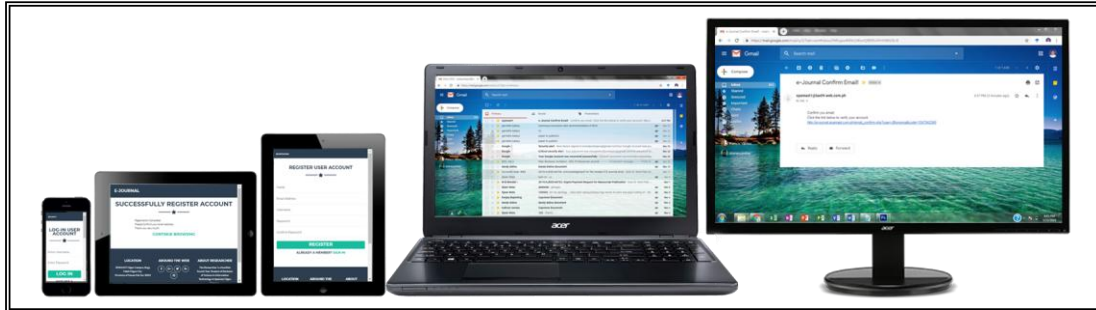
```
1$confirmcode = rand();  
2$email_from = 'e-journal@spamast.com.ph';  
3$message = "  
4Confirm you email.  
5Click the link below to verify your account.  
6http://e-journal.spamast.com.ph/email_confirm.php?user=$user&code=$confirmcode";  
7$headers = "From: $email_from \r\n";  
8 $headers = "Reply-To: DoNotReply@spamast.com.ph";  
9mail($email, "e-Journal Confirm Email!", $message, $headers);
```

308 The developed code above is very relevant to the website because the strong security
309 feature of the registration is addressed. The syntax code line 4 to 5 are the content of the
310 email to the email address of the applicant that includes the combination of a clickable
311 Uniform Resource Locator (URL) directly to confirm the active email address of the user
312 updating the table field status from "Inactive" to "Active". Active user account is tag as
313 validated information that can be used in the login page.
314

315 **3.2.2 Verification of User Account**

316 A user with an account that is validated through email owned a unique username and
317 password for the verification and for the authorization. This method can help prevent spam
318 attacks by bots, fraud and account takeovers, and identify unreachable users due to stale or
319 incorrect information.
320

321 Once the input of the user to the login page is a correct information the webpage returns the
322 home page of the Research and Capstone Project Electronic Repository. Thus otherwise an
323 alert message appears in instance the information is incorrect or did not match to the
324 database. This also means that the guest is not registered or the user trying to access the
325 website with no proper authorization.
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331 **Fig.5 Screen Shots for User Registration Page and Login Page**

332

333 **3.3Development of the Search Engine**

334

335 Developing search engine confirms the necessity of the module. The module is very relevant
336 in locating and sorting of the information stored in the database. Once the search engine has
337 crawled the contents of the database, it indexes that content based on the occurrence of
338 keyword phrases in each individual record. In developing the search engine using keyword
339 specific in the said study made it more sophisticated and hassle-free locating research and
340 capstone project documents.

341

342 **3.3.1 Displaying the Searched Results**

343

344 In searching an approved paper or documents, input specified keywords and returns a list of
345 the possible results that is similarly matches the keywords. The results then display in a
346 manner that a user can easily understand based on the pre-formatted style of the system.
347 Each displayed element has specific indexes that can be accessed by clicking. Then the
348 detailed and structured display of the entire paper is viewed.

349

350 **3.3.2Displaying the Research Paper**

351

352 The result of the search engine is displayed in list format which can be clicked redirected to
353 the specified research paper document that display the Portable Document Format (PDF)
354 of the entire document. Included in the display page are some primer of the paper. The code
355 of this module is also important because the usual the displaying technique is not following
356 the basic coding but instead using advance displaying code using combination of HTML and
357 CSS and action codes using PHP and JavaScript.

358

```

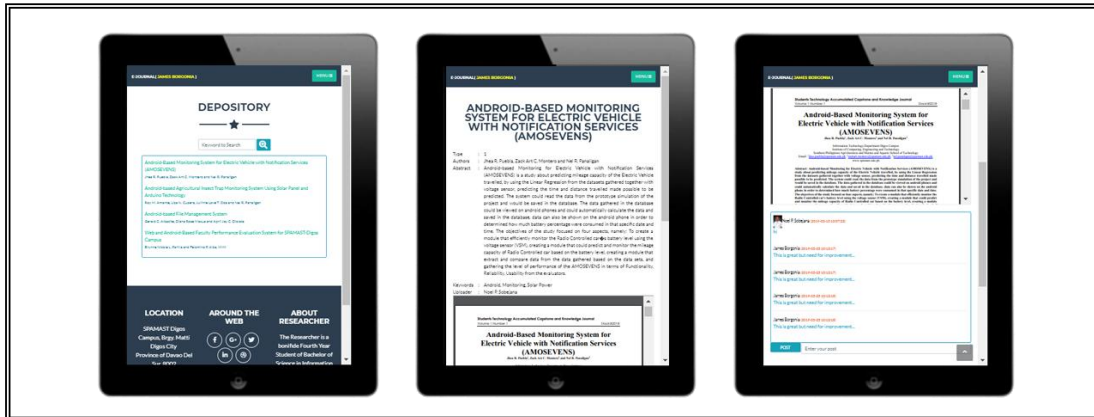
1<?php
2if(count($s_results) >0) :
3?>
4<divstyle="width:92%;margin:0px auto;padding: 10px;
5border: 1px solid #33a6cc; color: #a944442; background:
6#ffffff; border-radius: 5px; text-align: left;">
7<font color="#33a6cc"><?php foreach ($s_resultsas
8 $s_result): ?>
9<p><?php echo $s_result; ?></p>
10 <?php endforeach?></font>
11 </div>

```

359
360

361 The research paper display page is divided into two (2) major display. The first one is the
362 display for the primer of the paper. The title, research type, authors, abstract keywords and

363 the uploader of the paper. The second portion of the display is the viewing of the
364 preformatted
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Fig.6 Screen Shots to Find Research and Capstone Project Paper

3.4 Development of the Comment Box Module

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Some of the people give some suggestions and comments to broad their learnings. You know that writing comments what the audience is interested in, and that is something every writer hopes to do. Good conversations will have other benefits, too. Many times, a confusion is cleared up in the comments and other people add their ideas or experience so it just gets better and better.

3.4.1 Adding Comments Function

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The functionality to add comments is typing the comment in the box provided then click post buttons. If the information is available, the comments are submitted and posted. Otherwise, if the data not available nothing will happen then refreshes the page. The comments are freely posted as suggestions, appreciation and recommendation in the said study. Posting is a way of sharing feedbacks to the researcher and viewers.

3.4.2 Displaying Comments Function

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The comment module is embedded in the displaying of the research and capstone project documents. Upon retrieving the documents in the system, the comments are included in the page. Interfacing the functionality of posting comments to the system is strategic because opportunities and linkages to experts on the field of study can leave and provide additional improvement to the study.

3.5 Development of Security & Logging Features

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The system has security features to protection against fraud. The administrator can login automatically while users must register and confirm their email before they can login in the site. In addition, the website has an important feature that allows to record and store the transactions or changes made by the user. The log module serves as the history tracker of the web that provides list of manipulation of the users to the database as part of the accessibility and track the behavior of the users inside the system. The Figure 28 shows the access point that log module is being activated. In every page that the user makes an

403 access, an entry to the database with date and time of the action, identification of the user
404 and the Uniform Resource Locator (URL) address of the specific page.

405

406 In searching an approved paper or documents, input specified keywords and returns a list of
407 the possible results that is similarly matches the keywords. The results then display in a
408 manner that a user can easily understand based on the pre-formatted style of the system.
409 Each displayed element has specific indexes that can be accessed by clicking. Then the
410 detailed and structured display of the entire paper is viewed.

411

412 **3.6Level of Performance of the System**

413

414 The performance of the system in terms of reliability, functionality and usability is evaluated
415 by eighteen (18) registered users, thirty-one (31) guests and one (1) administrator. The fifty
416 (50) evaluators from the Table 4 are part of the research locale the Southern Philippines
417 Agri-Business and Marine and Aquatic School of Technology under Information Technology
418 Department. The technical expertise and the basic knowledge of the respondents are all in
419 the field of Information Technology.

420

421 Reliability of the system from the evaluation of the respondents resulted to 4.00 which
422 described as Very Agree. The characteristics of the website provides reliable output and
423 consistent error handling capabilities that is supported with the highest weighted mean of
424 4.04 mark as Agree Very in item "*the system is capable of maintaining its performance
425 despite the presence of errors during operations*". The item "*system resumes working and
426 restores lost data after failure*" had the lowest weighted mean of 3.96 mark as Agree
427 because of external factor that is uncontrollable in the project development. As mentioned in
428 the study of Por and the team that to identify a good system it must be able to provide the
429 quality services (Por, et al., 2012). Therefore, developing a reliable website deals with
430 thorough execution of the methodologies to anticipate tiny details most especially
431 connectivity aspect that greatly affects the system performance.

432

433 The overall rating of the system's functionality had a total mean of 4.49, remarked as Very
434 Agree that manifest completeness according to the objectives of the project and users'
435 preferable website actions. The completeness of the developed website clearly illustrated in
436 the item "*the system can require task are performed by the system satisfactory*" that scored
437 the highest weighted mean of 4.64 mark as Strongly Agree. Thus, the item "*the system helps
438 the user overcome any problem encountered while using it*" resulted to a lowest weighted
439 mean 4.28 mark as Very Agree because the website has no clear specific instruction or
440 process to follow. Therefore, a website design that illustrates clear process and instruction is
441 very important because as stated in the study of Zhang, Maron and Charles, that interface
442 design is the issues specifically layout and consistency should be considered to satisfy users
443 (Zhang, Maron, & Charles, 2013).

444

445 In the Usability of the system, the overall rating had a total mean of 4.36, remarked as Very
446 Agree that described the developed system by the evaluators useful. Expectedly, the
447 developed system is useful although the challenged to institutions is to be at par with the
448 international standards that concept of learning objects repositories is steadily increasing to
449 serve educational purposes (Alanazi & Abbod, 2014) but still the item "*the system performs
450 tasks in a straightforward manner*" marked low with weighted mean 4.30 mark as Very Agree
451 since testing and evaluation done with a limited duration. The item "*the documentation is
452 very informative*" got high weighted mean of 4.42 mark as Very Agree as methodology
453 implies that iteration approach keeps the project team more aware to the entire
454 characteristics of the website that is illustrated more detailed in the documentation.
455 Therefore, proper management with concrete methodology in the development that deals

456 with cost, time, quality and scope is beneficial to the projects team member and the
457 distribution of knowledge throughout the team is very relevant (Dudziak, 2000).

458

459 The over-all performance of website resulted to a weighted mean of 4.28 marked as Very
460 Agree. Though, the indicators resulted to very agreeable result still reliability got the lowest
461 because of the storing capability of the system that users question the completeness of the
462 information stored in the database. Thus, the functionality of the website clearly manifest that
463 the developed website functions to its purpose. However, the results are still not strongly
464 agreeable to the users because as stated in the project of Ampatzoglou, Michou and
465 Stamelos that using repository software are more significant to inexperienced users which
466 depict on this project (Ampatzoglou, Michou, & Stamelos, 2013). The evaluators of the
467 project are generally Information Technology practitioners which means with experienced in
468 using various software. Therefore, the performance of a quality software depends on the
469 selected evaluators and users.

470

471 **4. SUMMARY AND CONCLUSION**

472

473 **4.1 Summary**

474

475 The Development of Research and Capstone Projects Electronic Repository was conducted
476 to determine the level of satisfactoriness on the assessment with corresponding surveys
477 gathered. An evaluation method was used in this study is to inquire respondents. It was
478 distributed to the Information Students and faculty with regards specifically to the
479 functionalities of the project.

480

481 This study developed based on those problem stated, the developer aims to developed this
482 Research and Capstone Projects Electronic Repository to upload documents electronically
483 and reliable, functional, usable in terms of using it.

484

485 The study found out that the “Research and Capstone Projects Electronic Repository” was
486 equivalent to very agree in terms of functionality. It also revealed that the respondents come
487 up some problems in terms of browsing the site through mobile phone because of the
488 storage capacity of the website it can’t perform properly.

489

490 **4.2 Conclusion**

491

492 From the result of the project, it was concluded that the testing of the website was
493 functioning as it was expected, through there were problems encountered such as the
494 capacity of the website can’t perform properly on other gadgets. It was concluded by the fifty
495 (50) respondents and rated that the project is very agreed and met all the objectives.

496

497 The Reliability of the system from the evaluation of the respondents resulted to 4.00 which
498 described as Very Agree. The characteristics of the website provides reliable output and
499 consistent error handling capabilities that is supported with the highest weighted mean of
500 4.04 mark as Very Agree.

501

502 The functionality of the system had a total mean of 4.30, remarked as Very Agree that
503 manifest completeness according to the objectives of the project and users’ preferable
504 website actions.

505 The Usability of the system, the overall rating had a total mean of 4.34, remarked as Very
506 Agree that described the developed system by the evaluators useful.

507

508 The over-all performance of website resulted to a weighted mean of 4.28 marked as Very
509 Agree. Though, the indicators resulted to very agreeable result still reliability got the lowest
510 because of the storing capability of the system that users question the completeness of the
511 information stored in the database.

512
513 It was further concluded that during the testing of the project there are some encountered
514 problems but the researcher fixes it and test it back.

515
516
517

518 **CONSENT**

519

520 All authors declare that 'written informed consent was obtained from the patient (or other
521 approved parties) for publication of this case report and accompanying images. A copy of
522 the written consent is available for review by the Editorial office/Chief Editor/Editorial Board
523 members of this journal.

524
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