

Project creation essay examples

[Technology](#), [Development](#)



PROTOTYPE

The rapid prototyping technique will be a fundamental developmental technique that will be employed in this project. This technique will be used in the validation of the system requirement specifications. It will be able to discuss the specifications and the problems that are being experienced by the users of the current system. The prototype used in this project will discuss the various aspects of the proposed new system for the audio/visual classroom for the computer science and IT students.

The evolutionary prototype will serve as a convenient prototype for this system. The principle objective of this prototype is to help the developers and the end users to understand the system requirements as documented in the specification requirements document. The end users will be able to evaluate the prototype and visualize how the new system will be able to supplement their work. The prototype will also provide a platform for experimentation to see how the changes that will be experienced when the new system is implemented. Furthermore, this prototype will serve as a platform for omissions and error checking. These will be revealed as the users handle the prototype. Essentially, this prototype will seek to reduce the risks pertaining to the replacement of the current system with a new system. The prototype will be beneficial in providing a platform on which the system users can be trained and the system tested simultaneously. Furthermore, it will be able to reveal any reservations about the system about to be installed to replace the current system. It will also identify services of the new system

that will be confusing to the users as well as those that are missing and need to be included into the new system.

The evolutionary prototyping technique involves creation of a prototype which can then be developed further to come up with the final system that is intended for the users. For the audio/visual classroom project, several problems were identified that warranted the creation of a new system that will be used to replace the current system. To begin with, the current system has poor sound output from the sound devices that have been installed. There is the Panopto video capture and management device that has very limited capabilities and is incompatible with the media devices currently in use. Furthermore, the current system is plagued with the problem of recording both audio and video content. There is also limited control of the input and output that is entered or received from the system.

The fact that the institution is expanding its services to include acquisition of online degrees as well as e-learning as a service offered by the institution, these system challenges have become a major bottleneck that have necessitated the creation of a system that will overcome them.

The new system will also include a log in facility that will keep track of the system users. This is meant to enhance accountability of the system resources by keeping a log of the activities that have been conducted on the system, any system failures encountered as well as the difficulties encountered during system use. This will be able to help in the maintenance of the actual system when installed for use.

This prototype seeks to give a clear picture of the proposed system in use. Consequently it will be implemented partially and then an evaluation will be made. This will be based on the user response and acceptability of the system. Additionally, it will also reflect the necessary modifications that will need to be made to the current system and the elements of the old system that can be retained or reused effectively in the new system. This gives a clear perspective for the development of the new system while making sure the user needs are put into consideration in the development process. Of major importance during prototyping is the consideration of the functionality and availability of the existing system components.

REQUIREMENTS DOCUMENT

The current system has exhibited several problems that have necessitated the development of a new system. The new system seeks to cater for the shortfalls of the new system while providing a new interface that can adequately meet the growing demands of the users. The new system will involve the use of advanced technological devices that allow for proper communication between the instructor's and the students, including the remote students undertaking e-learning lessons as well as the online degree programs offered by the institution. The new system will be able to seamlessly coordinate and enhance the user activities with the devices used in the process eliminating the difficulties presented in the current system.

Requirements

There is a dire need to be able to connect several input sources to multiple output sources. The current system utilizes splitter devices which are only able to take and distribute the input

The new system will also need superior and enhanced video capturing capabilities that supersede those of the current system. There is a need to incorporate into the system video components that are compatible with a wide variety of devices such as iPad, iPod and individual computers. This will enable the plug and play capability where the instructors can just plug in their devices and continue with their presentation. It has also been noted that the system requires an enhanced control on the inputs and outputs that are either entered into or received from the system.

Remote clients can be able to access the resources from the system by logging into they system

Data captured from other input devices such as the iPods and other individual laptops can be interconnected simultaneously and channeled through the server and the display received from the screens.

Real live data from the smart web cams that is captured can be transmitted from the server to all other locations directly.

Tentative solutions

Several pertinent solutions were noted that will be fundamental in ensuring the success of the new system. In order to solve the audio input requirement for the new system, will require the installation of a Bluetooth microphone for the instructor to replace the cordless one that is limited.

The need for superior video capturing capabilities will be solved by allocating the instructor with a fixed webcam through which he/she can use for remote communication. This will enhance such aspects of the new systems as long distance learning and e-learning.

User Interface Concerns and Goals

There were several expectations from the users of the system that are considered in the development of the system. To begin with, the incorporation of new technology into the current system poses a challenge to some of the conservative users of the old system. This will necessitate training of such users prior to fully implementing the new system.

Furthermore, the users expect that the new system will be able to meet the shortcomings of the current system and enhance their productivity in terms of increasing the efficiency with which they carry out tasks using the system. The complexity of the new system components poses an interface challenge. This is because new system users may find it difficult to interact with the system which may lead to unnecessary damages on the system. The system goals involved efficient coordination between audio and visual devices that were being used. Additionally, the system strives to meet the expansive demand of the services of the institution by being able to capture and transmit high quality information from the classroom into the institution's learning portal.

Required System Outputs

The system will be expected to meet a certain level of quality. To begin with, the system will be expected to offer a fluid control of input and output

devices. For instance, the cordless microphones will be replaced with the Bluetooth microphones. These have enhanced sound capturing capabilities. Furthermore, the video capturing capabilities are expected to be of high quality. High definition cameras are used in the new system for capturing the highest quality videos. These videos will then be used for further learning purposes online. New 3D output screens will also be installed to match the latest technological advancements and enhance presentations. The sound output from the system will be of the highest quality coming from newly installed 5.1 surround speaker system.

Project constraints

The project is faced with several bottlenecks. The major challenge is the lack of knowledge of how to use the system by the intended users. The system is viewed as being too technical. This has made it necessary to carry out training on how to use the system appropriately.

Product constraints

The main constraint faced by the product is the lack of proper utilization. Despite the expansive capabilities of the product, the users are not able to fully utilize it due to the perceived complexity of the system.

In order to acquire the perception of the users towards the system, the following are the questions were asked and the client responses received;

Q. Do you think it is necessary to have a new system?

A. From the challenges we have been facing, we really need a new system.

Q. From your experience with the old system, do you think this is a viable

project?

A. I think this is a very noble project that will help us.