The Hughes Science Pipeline Project Website

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My internship project was the development of a website for the Hughes Science Pipeline Project (HSPP). The website provides information to students, faculty, and the public about the different activities sponsored by the HSPP.

In developing the website, I first had to analyze the hierarchy and structure of the HSPP program. The final design of the website's architecture reflects the overall structure of the program. The outline maps the organization of the website’s content, which describes the activities sponsored by the HSPP as well as the accomplishments of student and faculty participants. These activities are organized into four major program components: Student Development, Faculty Development, Curriculum Development, and the Intercollegiate Partnership.

I conducted research on various technologies and software packages, such as Java, JSP, ASP, and Macromedia, that could be used to develop the website. I eventually focused on Macromedia Software, PhotoShop, and JavaScript. Macromedia Software enables web developers to design and code during the development of the website. It provides several tools that are needed to build websites and applications including Dreamweaver, Fireworks, and Macromedia Flash. Dreamweaver is an application that provides web developers with visual layout tools and support for editing the code. Fireworks, as well as PhotoShop, allow web developers to create original web graphics. Fireworks, however, brings more interactivity to the website by allowing web developers to create complex pop-up menus and rollover effects as well as graphical buttons. Moreover, Fireworks makes it possible to export its source files to Macromedia Flash and Dreamweaver. The Flash environment has multimedia and application development features. JavaScript is powerful in bringing interactivity to the website. The JavaScript code could run in three environments: as a scripting language in the server side, as an embedded language in the server parsed HTML (Hypertext Markup Language), and as an embedded language run in web browsers where it becomes the most significant part of DHTML (Dynamic Hypertext Markup Language).

The management and maintenance of the website is an ongoing process that requires updating the content, testing the website in different browsers, debugging code errors, and testing the linkage of pages.