

Certificate Mailer: Bulk certificate mailing web application

Rashmi Tiwari¹, Vrishti Bansal²

¹Assistant Professor, Dept. of Computer Science and Engineering, HMR Institute of Technology & Management, Delhi, India

²Student, B. Tech, Dept. of Computer Science and Engineering, HMR Institute of Technology & Management, Delhi, India

ABSTRACT:-

This research paper intends to analyze and assess the usability and effectiveness of e-certificate mailer systems. Digital systems like **Certificate Mailer** are used to email digital certificates, such as completion or achievement certificates.

Using a web tool like Certificate Mailer is highly advantageous for companies who hold online webinars. A certificate mailer is software that enables the user to create and mail several certificates at once using a existing certificate template.

In this passage, an overview of e-certificate mailer systems is given, along with an explanation of their characteristics, benefits, and method of data gathering and processing.

The section also references the usage of electronic certificate mailer systems to protect

and automate the issuance of digital certificates. It provides an explanation of how e-certificate mailer systems function, including how data from CSV files is processed and how certificates are sent to the appropriate emails. The paper will conclude with suggestions for additional study and advancement in this field.

INTRODUCTION:-

An e-certificate mailer system is a digital tool or software that is used to send and receive electronic certificates via email.

E-certificates include, for instance, certificates of achievement, certificates of completion, and other digital credentials. Organizations, staff members, and other users have access to a secure and practical method of receiving certificates, extending the project to a larger scale and topic of high demand of e-certificate mailer systems in education and professional development.

The use of e-certificate mailer systems has grown recently as more organizations and institutions have turned to embracing digital means for credentialing and professional development. This is as a result of the numerous benefits they provide, such as:

- **Convenience:** E-certificate mailer systems make it convenient for recipients to get their certificates online, doing away with the requirement for paper-based certificates.
- **Security:** Digital certificates offer a high level of security for the issuer and the recipient since they are challenging to forge or tamper with.
- **Verification:** E-certificate mailer systems offer a safe and effective means to check the legitimacy of digital certificates, making sure they were issued by reputable institutions and organizations.
- **Email transmission:** The capacity to email e-certificates to recipients directly or through a middleman, such as a certificate administrator.
- **Reduced Manpower:** Converting to smart technology and reducing human labor are important changes brought about by the shift to digital.

PROBLEM STATEMENT:-

The hardest hurdle for webinar hosts and internship providers is mailing certificates to participants. It might be exceedingly challenging to create individual certificates for each participant and mail them to their assigned addresses when thousands of individuals sign up.

It can be a very challenging operation that is fraught with errors to create individual certificates, add the subject and body of the email, and mail the certificates to the emails.

As a result, we have created a project that, with just a few clicks, will use a template certificate, personalise each one with names, and deliver to each recipient's unique email address.

OBJECTIVE:-

In recent years, e-certificate mailer systems have grown in popularity as a result of how easy and effective it is to send and handle certificates. These programmes are widely used in the human resources, event planning, and professional development sectors as well as in the education and training industries. As more organisations and institutions switch to digital methods for credentialing and professional development, the use of e-certificate mailers in education and professional development has increased recently.

Additionally, the firms aim to cut expenses and boost productivity.

E-certificate mailers are used in the education industry to create and send certificates of completion for online courses, MOOCs, and other types of distance learning.

Additionally, certificates for in-person training, workshops, and conferences are issued using them. In contrast to conventional paper-based certificate mailing, e-certificate mailers enable students to receive their certificates electronically, which is more practical and effective.

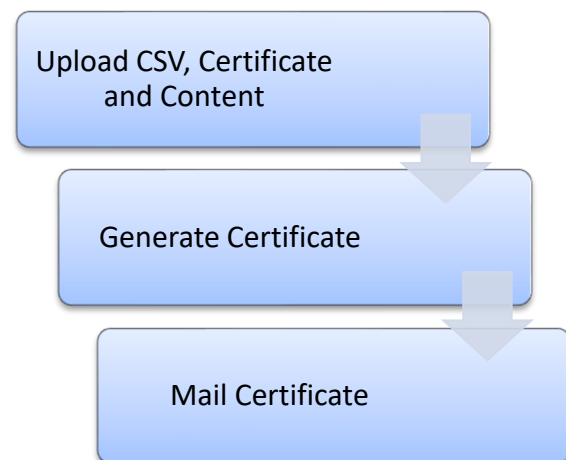
In the past, certificates were produced and sent via mail to recipients, which was an expensive and time-consuming operation. Organizations can now send certificates electronically, saving time and money, thanks to the development of e-certificate mailer systems.

METHODOLOGY:-

Nowadays, most webinar registrations are completed using Google Forms because it is a convenient method for both participants and webinar organisers. Google Forms is advantageous for the Certificate Mailer Application since you can get the data as a CSV.

The participant's name and email are included in the CSV file that is uploaded to the programme. A raw file of the certificate to be mailed is provided along with participant information. The user may also add or change the email's subject and body as necessary for his convenience.

When everything is finished, the Certificates are automatically generated and sent to the appropriate participants' emails.



CONCLUSION:-

According to the study's findings, e-certificate mailer systems offer high levels of usability and efficiency for businesses and receivers, making it a user-friendly platform that makes it simple for them to personalize certificate templates, deliver certificates, and track.

Furthermore, the study discovered that by automating the process of sending certificates by email, e-certificate mailer systems save enterprises time and money. The technologies also give recipients a faster and more practical way to access and download their certificates. Additionally, greater tracking of student progress and training completion is made possible by the interaction with other systems, such as learning management systems.

Due to the difficulty of forging or tampering with electronic certificates, the study also discovered that e-certificate mailer systems are more secure than conventional paper certificate systems. Electronic certificates can also be signed, resulting in a certificate that is tamper-proof and has legal validity. It is advised that businesses think about implementing e-certificate mailer systems to enhance their certificate administration workflow.

FUTURE SCOPE:-

1. **Additional security measures research:** It's critical to make sure that e-certificate mailer systems are secure and protected from potential risks like hacking and phishing because they handle sensitive information. Future studies can concentrate on finding and implementing extra security precautions to improve the security of e-certificate mailer systems.
2. **Enhanced Technologies:** The job in the future may involve creating and improving the application using the newest technologies that are being launched.
3. **Integration with other systems:** E-certificate mailer systems can be connected to other platforms like learning management systems and personnel management platforms. In order to increase productivity and simplify procedures, future study could examine the advantages of merging e-certificate mailer systems with other systems.
4. **Connection to Cloud Servers:** Linking the web application to the cloud servers so that users can access the data there directly rather than through the business's manual databases. This will also assist in updating data and statistics in

real time as events occur rather than doing so at predetermined intervals.

5. **Adding a user dashboard:** With a dashboard, controlling and analysing data will be simpler for users. Since it would increase security and provide a better user experience, it is quite crucial.

REFERENES:-

[I] A R Reddy, A Review of Digital Certificates, Core R & D, ITI Ltd.

[II] Abhay Verma and Bharat Sharma, Dynamic E-Certificate Designing with Automatic Mailing System using Python and SQLite3, [Available]: <http://www.publishingindia.com/jais>

[III] Mohit Bajpai, Ayush Jain, Chandan Kumar, Bhawani Shankar Purohit. A Research Paper on Web Development Using HTML5 and CSS3. Journal of Advanced Database Management & Systems. 2019

[IV] Berjon R., Ballesteros S. (2015). What is Scholarly HTML? <http://scholarly.vernacular.io/>

[V] Sporny M. (2015). HTML+RDFa 1.1: Support for RDFa in HTML4 and HTML5. W3C Recommendation 17 March 2015. World Wide

Web Consortium. <http://www.w3.org/TR/rdfa-in-html/>

[VI] Raggett D, Le Hors A, Jacobs I. 1999. HTML 4.01 specification. W3C recommendation, 24 December 1999. World Wide Web Consortium. Available at <http://www.w3.org/TR/html401/>.

[VII] Hickson I, Berjon R, Faulkner S, Leithead T, Doyle Navara E, O'Connor E, Pfeiffer S. 2014. HTML5: a vocabulary and associated APIs for HTML and XHTML. W3C recommendation 28 October 2014. World Wide Web Consortium.

[VIII] SURAJ SHAHU GAIKWAD1, PROF PRATIBHA ADKAR, A Review Paper on Bootstrap Framework, APR 2019 | IRE Journals | Volume 2 Issue 10.

[IX] Efron, B., and R. J. Tibshirani (1993). An Introduction to the Bootstrap, New York, Chapman and Hall.

[X] Efron, B. (1982). The Jackknife, the Bootstrap and Other Resampling Plans, Philadelphia, Society for Industrial and Applied Mathematics.

- [XI] Bootstrap accessed from "https://www.tutorialspoint.com/bootstrap/index.htm" for Hack?," IEEE, pp. 63-72, 2015. <https://doi.org/10.1109/saner.2015.7081816>
- [XII] Bootstrap accessed from "https://www.w3schools.com/bootstrap/default.asp" [XVIII] SendGrid Inc SWOT Analysis / SWOT Matrix (essay48.com)
- [XIII] Douglas Kunda, Alinaswe Siame, Review Evolution of PHP Applications: A Systematic Literature Review [XIX] The paper proposed by Zend Technologies "The WAMP platform is a Multitier EnterpriseApplication." <https://doi.org/10.3991/ijes.v5i1.6437>
- [XIV] J. Tulach, "Practical API Design: Confessions of a Java Framework," Apress, 2008.
- [XV] D. Letarte, F. Gauthier and E. Merlo, "Security Model Evolution of PHP Web Applications," Fourth IEEE International Conference on Software Testing, Verification and Validation, pp. 290-298, 2011. <https://doi.org/10.1109/ICST.2011.36>
- [XVI] S. Bergmann and S. Pribsch, Real-World Solutions for Developing High-Quality PHP Frameworks and Applications, Wiley, 2011.
- [XVII] L. Eshkevar, F. Dos Santos, J. R. Cordy and G. Antoniol, "Are PHP Applications Ready