Designing E-learning Portal: How Academics come efficiently into Practice

[1]Aman Chandra Verma, [2]Shipra Srivastava, [3]Devanshu Trivedi, [4]Nandini Sharma, [5]Neha Kumari

[1]B.Tech Student, Greater Noida Institute of Technology, Greater Noida, India

[2]Assistant Professor, Greater Noida Institute of Technology, Greater Noida, India

[3]B.Tech Student, Greater Noida Institute of Technology, Greater Noida, India

[4]B.Tech Student, Greater Noida Institute of Technology, Greater Noida, India

[5] B.Tech Student, Greater Noida Institute of Technology, Greater Noida, India

Abstract:

This project consists of the event of a tributary internet application to show and gather info. The goal of this application is to form the inspiration for a web-based abstraction inventory for minimize the Gap between every individual in Department. The inventory is supposed to develop a platform wherever each Student to school will access (WEFSA) simply. This is vital as a result of the push to modernize infrastructure ends up in cut back useful gap and examine the matter. the net application can consist all totally different interface for Actor's happiness to the department together with their practicality and access assigned with them to use remotely.

We introduce a cloud storage and cyber security elementary to form the web site safer and simply accessible. Cloud Computing could be a general term that involves delivering the hosted services over the net. As Cloud Computing has mature in quality, totally different models and preparation methods have united to assist the particular wants of various users. every style of cloud service supplier and preparation of the tactic provides totally different levels of management and management.

Cyber Security plays a crucial role within the field of knowledge technology. Securing the knowledge has become one in all the largest challenges within the gift day. Thus, this paper involves Security management that defines a collection of techniques accustomed shield the integrity of networks, programs and knowledge from attack, harm or unauthorized access. internet primarily based applications are getting a middle of attraction for malicious hackers.

Index Terms – **WEFSA, cyber security, cloud computing, AWS.**

I.INTRODUCTION

The target of our paper is to demonstrate our project named WESFA (Where each Student to school will Access) are addressing the upkeep of lecturers of the scholars over the cloud among the school within the most reliable and economical method. Main objective of our project is to record varied details of activities within the departments of the school just like the notes, assignments, results of the online/offline exams on one place which is able to change every department's work load.

Our main conditions are compiled as below: during this paper, we tend to examine a way to absolutely abide the Cyber security fundamentals to shield the web site from malicious attacks and permit the user to access freely from remote location with the assistance of cloud computing ideas.

II. WEB DEVELOPMENT

IT is the work concerned in developing a Website for the Internet (World Wide Web) or an intranet (a non-public network).[1] Web development will vary from developing an easy single static page of plain text to complex web applications, electronic businesses, and social network services. A lot of comprehensive list of tasks to that internet development unremarkably refers, could include Web engineering, Web design, online page development, shopper liaison, client-side/server-side scripting, internet server and network security configuration, and e-commerce development.

Among internet professionals, "Web development" sometimes refers to the most non-design aspects of building internet sites: writing markup and coding. internet development could use content management systems (CMS) to form content changes easier and out there with basic technical skills.

Web development refers to putting together web site and deploying on the net.

Web development tools helpsthe developer to check and rectify the net sites.currently a day the net development toll keep company with the net browsers as add-ons. All internet browsers have inbuilt tools for this purpose.

These tools permit the net developer to use HTML, CSS and JavaScript etc. These area unit accessed by hovering over AN item on an online page.

III. CYBER SECURITY

Security testing during this analysis aims to keep up the confidentiality of the information, to visualize against any info leak and to keep up the practicality as supposed. It checks whether or not the safety needs area unit consummated by the net applications once they area unit subjected to malicious input file.

Due to the rising explosion within the security vulnerabilities, there happens a requirement to know its distinctive challenges and solutions. so, security testing part is concatenated to the event part for increasing the trait of the net applications.

IV. ISSUES ASSOCIATED WITH SECURITY TESTING OF INTERNET APPLICATION:

A) **SQL Injection**- SQL injection could be an internet security vulnerability that permits AN assaulter to interfere with the queries that AN application makes to its information. It typically permits AN assaulter to look at knowledge that they're not usually ready to retrieve. This would possibly embrace knowledge happiness to different users, or the other knowledge that the appliance itself is ready to access. A victorious SQL injection attack may result in unauthorized access to sensitive knowledge, like passwords, Mastercard details, or personal user info.

B) **DDOS attacks**- Hackers one in all the foremost common approaches is denial of service DOS attack. If you flood a web site with a lot of traffic than it absolutely was engineered to handle, you may overload {the web site the web site}'s server and it will be nigh- impossible for the website to provide its content to guests United Nations agency are attempting to access it. DDoS attacks, meanwhile, use quite one machine to send malicious traffic to their target. Often, these machines area unit a part of a botnet — a set of computers or different devices that are infected with malware and might so be controlled remotely by a private assaulter. In different circumstances, multiple individual attackers launch DDoS attacks by operating along to send traffic from their individual computers.

C) **Cross web site scripting (XSS):** - This paper throws lightweight on common forms of techniques that area unit far-famed to be extremely effective, like malware, phishing, or cross-site scripting (XSS). The assaulter aims to execute malicious scripts in an exceedingly applications programme of the victim by together with malicious code in an exceedingly legitimate web content or internet application. the particular attack happens once the victim visits page or web application that executes the malicious code. Page or web application becomes a vehicle to deliver the malicious script to the user's browser. Vulnerable vehicles that area unit unremarkably used for Cross-site Scripting attacks area unit forums, message boards, and websites that permit comments.

D) **Credential utilize:** - one in every of the foremost necessary sorts of attack is papers reuse. even supposing security best practices universally advocate that you just have distinctive passwords for all of your applications and websites, many folks still utilize their passwords. Once attackers have a group of usernames and passwords from a broken web site or service, they apprehend that if they use these same credentials on alternative websites there's an opportunity, they'll be able to login.Goal of security testing is to notice those defects that might be exploited to conduct attacks.

E) **Nmap:** - Nmap could be a free, open supply tool for distinguishing hosts on a network and also the services running on those hosts. It's a strong tool for mapping out verity services being provided on a network. Nmap is employed to find hosts and services on a electronic network by causing packets and analysing the responses. Nmap provides variety of options for inquisitory pc networks, together with host discovery and repair and OS detection.

F) **Nessus:** - Nessus is another free network security tool. It's designed to visualize for and optionally verify the existence of identified security vulnerabilities. It works by watching varied items of data a couple of hosts on the network, like elaborate version info concerning the OS and any package providing services on the network. This info is compared to an info that lists vulnerabilities identified to exist in sure package configurations.

G) **Wireshark**: - Wireshark could be a free and ASCII text file packet analyser, used for network troubleshooting, analysis, package and rule development. It captures network traffic on the native network and stores that information for offline analysis. Wireshark captures network traffic from local area network, Bluetooth, Wireless connections and additional.

H) **Metasploit:** - The Metasploit Project could be a pc security project that has info concerning security vulnerabilities and aids in penetration testing and IDS signature development. throughout the knowledge gathering section, Metasploit integrates seamlessly with Nmap. Once we've known a weakness, hunt through Metasploit's massive and protrusile info for the exploit which will crack open that port and find US in.

I) **Burp suite:** - Burp Suite is associate integrated platform for activity security testing of internet applications. Its varied tools work seamlessly along to support the whole testing method, from initial mapping associated analysis of an application's attack surface, through to finding and exploiting security vulnerabilities.

V. CLOUD COMPUTING

Amazon internet Services for internet hosting: -

A) Broad platform support: With AWS, you'll be able to use no matter Content Management System (CMS) we tend to like, together with WordPress, Drupal, Joomla, and more.
B) Data-centres worldwide: customers will be anyplace within the world. With AWS we are able to have a datacentre or Content Delivery Network (CDN) hosting our web site in any earth science we decide with simply a couple of mouse clicks.
C) Scalable from day one: Website traffic will fluctuate loads. From quiet times within the middle of the night, to campaign driven social media sharing traffic spikes, AWS infrastructure that may grow and shrink to fulfil our desires.
D) Flexible valuation models: AWS solely charges US for the resources you employ, with no up-front prices or long-run contracts. AWS has internet hosting choices that supply pay-as-you-go valuation or fastened monthly valuation.

Features of AWS:

•Global handiness: AWS incorporates a massive information centre with each of those in operation at multiple handiness zones. By victimisation this, it's currently doable for a US-based company that wishes to enhance its presence within the Indian.

•Scalability and suppleness: - AWS offers unlimited flexibility and measurability and cloud automation is one such tool that has on- demand scaling.

•Security: - AWS maintains confidentiality, integrity, and handiness of your information that is that the most significant feature of the AWS.

•Cost-effective: - Cost is one in every of the foremost necessary factors that won't to be thought-about whereas delivering within the IT solutions. It provides no advanced investment, long-run commitment, or minimum pay.

CONCLUSION:

This portal concludes on building the Framework that will facilitate shift e learning to the thought and maximize its impact within the schoolroom is that the current priority sensible and experimental data of eLearning is to of a scattered at intervals and across establishments in order that even sure-fire practices and fascinating experiences have restricted impact and visibility. There'll even be high demands on delivering the education in a very versatile way; pace wise and delivery wise. the scholars are typically operating or finding out at the same time associated this argues for exams and activities to be provided in an open manner wherever students will opt for what time of day assignments and exams ought to be conducted. tofulfill those demands and expectations, this learning portal can establish a virtual atmosphere for scattering access to data to its workers and academics. It'll be a cheap thanks to obtrude upon on-line coaching at intervals the department. Thus, the scope for this goes on increasing, and it'll be forever facilitating the standard ways of education and pains to present the globe best data doable.In this paper, we've tried to spot varied problems and challenges moon-faced by security testing of internet primarily based applications and their solutions. we tend to provide a summary of recent security testing techniques and their application. The platform keeps track of all the problems whereas developing and testing the online application. It fulfils the growing would like for info on security testing techniques to change their effective and efficient application. It provides info for understanding the various services suppliers and options accessible within the AWS Cloud and the way to host a web site on AWS. it's an online service that is employed for hosting associate application. associate AWS permits you to access the resources additional instantly. AWS cloud provides high security, responsibility, and privacy and every service provided by the AWS cloud is extremely secure.

REFERENCES:

[1] Saloni Khurana . "A Review Paper on Cyber Security" International Journal of Engineering Research & Technology (IJERT), ISSN: 2278-0181Published by, www.ijert.org VIMPACT - 2017 Conference Proceedings.
[2] Luanne Burns Chamberlain, Richard George, Thomas Llansó. "Introduction: Cybersecurity and Software Assuranc Minitrack", Proceedings ofthe 51st Hawaii International Conference on System Sciences | 2018.
[3] Mohammed N. Al Mhiqani, Rabhiaahmad, Warusia Mohamed. "Cyber-Security Incidents: A Review Cases in Cyber-Physical Systems:",International Journal of Advanced Computer Science and Applications 9(1):499-508, February 2018, DOI:10.14569/IJACSA.2018.090169.
[4] Cloud Computing vs. Virtualization http://www.learncomputer.com/cloud-computingvsvirtualization.

[5] A.Navya, Dr.Ch.Srihari, Dr.ASatyanarayana, "Consisting Control Organize the Exact Components of Cloud Computing Web Services",Journalof engineering Sciences, Vol 11, Issue 1, JAN/2020, ISSN NO:0377-9254.