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INTRUSION DETECTION SYSTEM FOR INTERNAL ATTACKS USING DATA MINING FORENSIC TECHNIQUES

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Abstract — *Intrusion attacks means someone from outside who is not part of the network and who is trying to trying to access something into our network system by wrong intention. So detection of intrusion basically refers to an act of finding network system for malicious or harmful activity. We can develop web based application which can find and generate the notification if any harmful activity is indemnified. Here we are proposing a system with intention to identify internal intrusion in system or network. We can use data mining forensic techniques to indentify internal intruders and take immediate action accordingly.*

There so many ways to protect the networks and data from attackers for example firewall but it is observed that firewalls commonly try to protect computer system against outsider attacks. So in this paper we are trying to explain different and forensic techniques and data mining Techniques to detect and protect internal network at System call level.

Keywords: *Forensic Technique, Network attacks, malicious Activities, insider attacks.*

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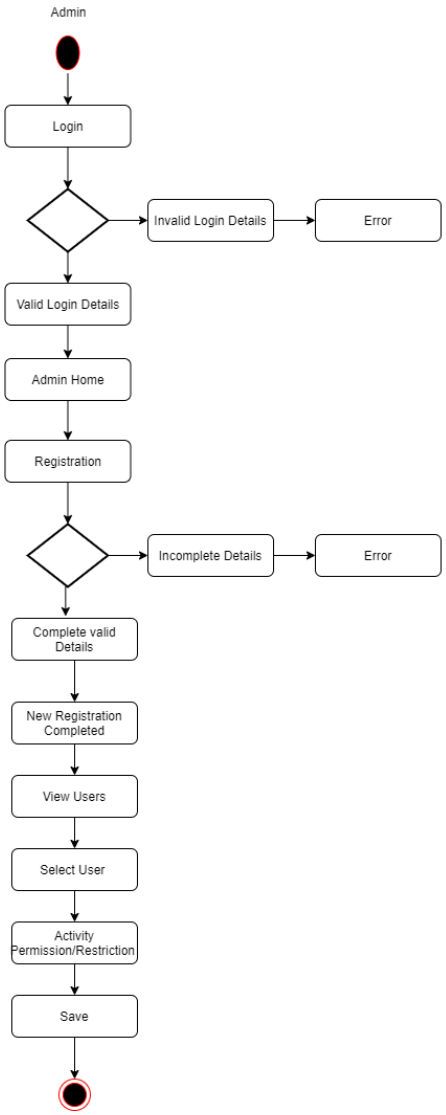
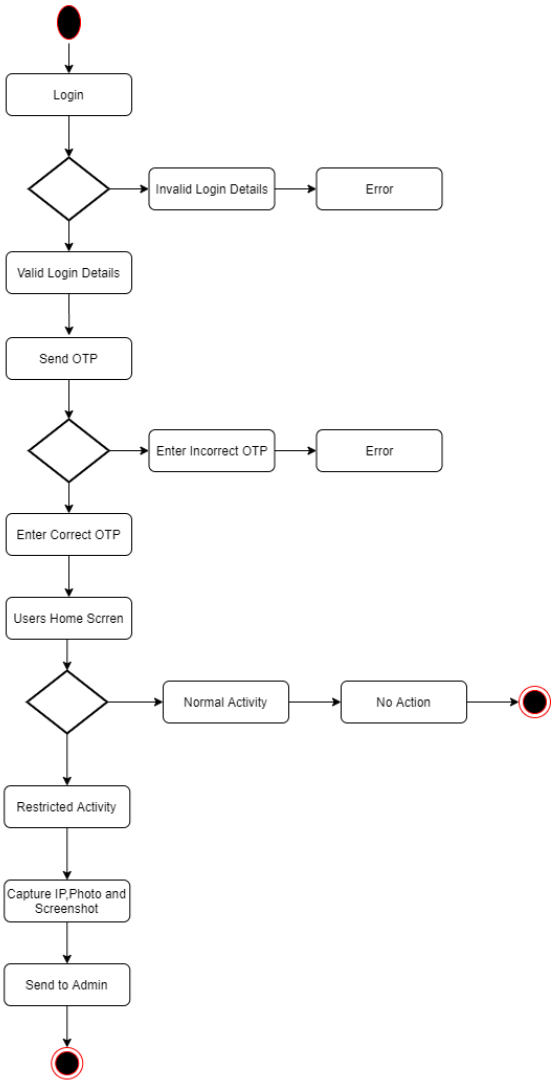
I. INTRODUCTION

The crackers and malicious users are looking for weak targets such as unpatched systems, systems infected with networks running insecure services The assurance of safety should be applied to data and computer systems.. Thus the security alert is very important to control the attacks. A notification should be sent to the security team members or Administration about the various attacks which have occurred so that they can respond in real-time to the threat. In this paper we have discussed various techniques for anomaly detection techniques.

II. PROPOSED SYSTEM

This proposed system mainly concentrate on providing and improving huge efficiency for detection of intrusion attacks. As we are using system calls to detect the intrusion attacks, this can be complimented using data mining and forensic techniques. This Techniques will detect and provide information about a user. After which the commonly used SC - patterns will be filtered, which detects malicious behaviors launched toward a system at SC level. This system uses forensic profiling techniques and data mining to mine system call patterns. The proposed system needs to focus on the SC-patterns and the system calls generated and produced by these commands so that the internal attacks can detect the malicious behaviors issued by them and then control this type of attacks and protect system from being attacked.





- Admin Module:
  Admin will be have authority to register the users and one time configuration of activities of user.

- User Module:
  Once admin has registered the User then User can login in system and He/She can start the activities.

- System Module:
  System will observe restricted activities and generate the alert if any restricted activities are caught of users.

- System after malicious attack
  It will capture the screenshot of screen, capture the picture of user, and will capture the IP address of system from where the attack took place.

- Sending mail and required details Module:
  When the malicious activity performed .i.e. user tries to access the restricted activities. System will generate the alert and send the details of attack.

III. CONCLUSION

As prevention is better than cure, similarly we have focused on to build a system that prevents intrusion activities and attacks. This can be implemented from small scale to large corporate and non technical areas as well. Also we have trying to provided multiple scenarios and modules where we can keep a track and record of all the users and their activities. It will also help us generate trends which we can store in database and use it for future reference. It will also serve the purpose of maintaining logs which can be sent to higher and dedicated authorities for checking and preventing intrusion detections and harmful attacks or activities which do not have good intentions.

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