MHABE Access Control Method for Mobile Cloud Computing

Ms. ARI SAI VARSHINI #1, Mr. DHULIPALLA SAIKRISHNA #2, Ms. INAPAKOLLA MANJUSHA #3, Mr SADHU BRAHMANANDA REDDY #4, Mr.B Kishore Kumar #5

#1student, Dept Of CSE, Qis College Of Engineering And Technology,Ongole,Prakasam(Dt)India.
#2student, Dept Of CSE, Qis College Of Engineering And Technology,Ongole,Prakasam(Dt)India.
#3student, Dept Of CSE, Qis College Of Engineering And Technology,Ongole,Prakasam(Dt)India.
#4student, Dept Of CSE, Qis College Of Engineering And Technology,Ongole,Prakasam(Dt)India.
#5 Asst.Professor , Dept Of CSE, Qis College Of Engineering And Technology,Ongole,Prakasam(Dt)India.

ABSTRACT:

Cloud computing is an Internet-based computing pattern through which shared resources are provided to devices on demand. Its an emerging but promising paradigm to integrating mobile devices into cloud computing, and the integration performs in the cloud based hierarchical multi-user data-shared environment. With integrating into cloud computing, security issues such as data confidentiality and user authority may arise in the mobile cloud computing system, and it is concerned as the main constraints to the developments of mobile cloud computing. In order to provide safe and secure operation, a hierarchical access control method using modified hierarchical attribute-based encryption (M-HABE) and a modified three-layer structure is proposed in this paper. In a specific mobile cloud computing model, enormous data which may be from all kinds of mobile devices, such as smart phones, functioned phones and PDAs and so on can be controlled and monitored by the system, and the data can be sensitive to unauthorized third party and constraint to legal users as well. The novel scheme mainly focuses on the data processing, storing and accessing, which is designed to ensure the users with legal authorities to get corresponding classified data and to restrict illegal users and unauthorized legal users get access to the data, which makes it extremely suitable for the mobile cloud computing paradigms.

1.INTRODUCTION

With explosive growth of mobile devices including smart phones, PDAs, and tablet computers and the applications installed in them, the mobile-Internet will maintain the development growth trend as 4G communication network is extensively promoted to our lives. What users of the mobile devices and applications need is that mobile-Internet can provide them with the service which is user-friendly, high-speed, and steady. In addition, the security issues of

mobile terminals and the Internet access are attached importance to. And as a combination of cloud computing, mobile devices and wireless networks, mobile cloud computing is an emerging but very promising paradigm which brings rich computational resources to mobile users, network operators, as well as cloud computing providers.

2. LITERATURE SURVEY

2.1 S. Abolfazli, Z. Sanaei, E. Ahmed, A. Gani, and R. Buyya

The paper "Cloud based augmentation for mobile devices: motivation, taxonomies, and open challenges," the effects of remote resources on the quality and reliability of augmentation processes and discuss the challenges and opportunities of employing varied cloud-based resources in augmenting mobile devices. We present augmentation definition, motivation, and taxonomy of augmentation types, including traditional and cloud-based.

We critically analyze the state-of-the-art CMA (Cloud-based Mobile Augmentation) approaches and classify them into four groups of distant fixed, proximate fixed, proximate mobile, and hybrid to present taxonomy. Vital decision making and performance limitation factors that influence on the adoption of CMA approaches are introduced and an exemplary decision making flowchart for future CMA approaches are presented. Impacts of CMA approaches on mobile computing is discussed and open challenges are presented as the future research directions.

2.2 N. Fernando, S. W. Loke, and W. Rahayu

The paper "Mobile cloud computing: A survey," Future Generation Computer Systems. The resource demands of specific services develop as well along with the increase of mobile. Nonetheless, mobile certainly will often be restricted performance that is regarding computation, storage, battery life, context adaptation of connectivity, scalability, and heterogeneity included security issue. An outstanding solution to address these limitations is definitely to offload computation is mobile cloud computing (MCC).

However, present approaches don't address the complexity which results from quickly and context that is constantly changing in mobile user scenarios and accordingly developing effective and efficient MCC applications continues to be demanding. Consequently, this paper demonstrates a summary of demands for MCC applications along with a classification of present solutions. Additionally, it brings a design lead to the collection of appropriate concepts for various classes of common applications which are cloud augmented tend to be mobile. Finally, we offer open issues that guideline to researchers take into consideration when designing MCC.

3.SYSTEM DESIGN

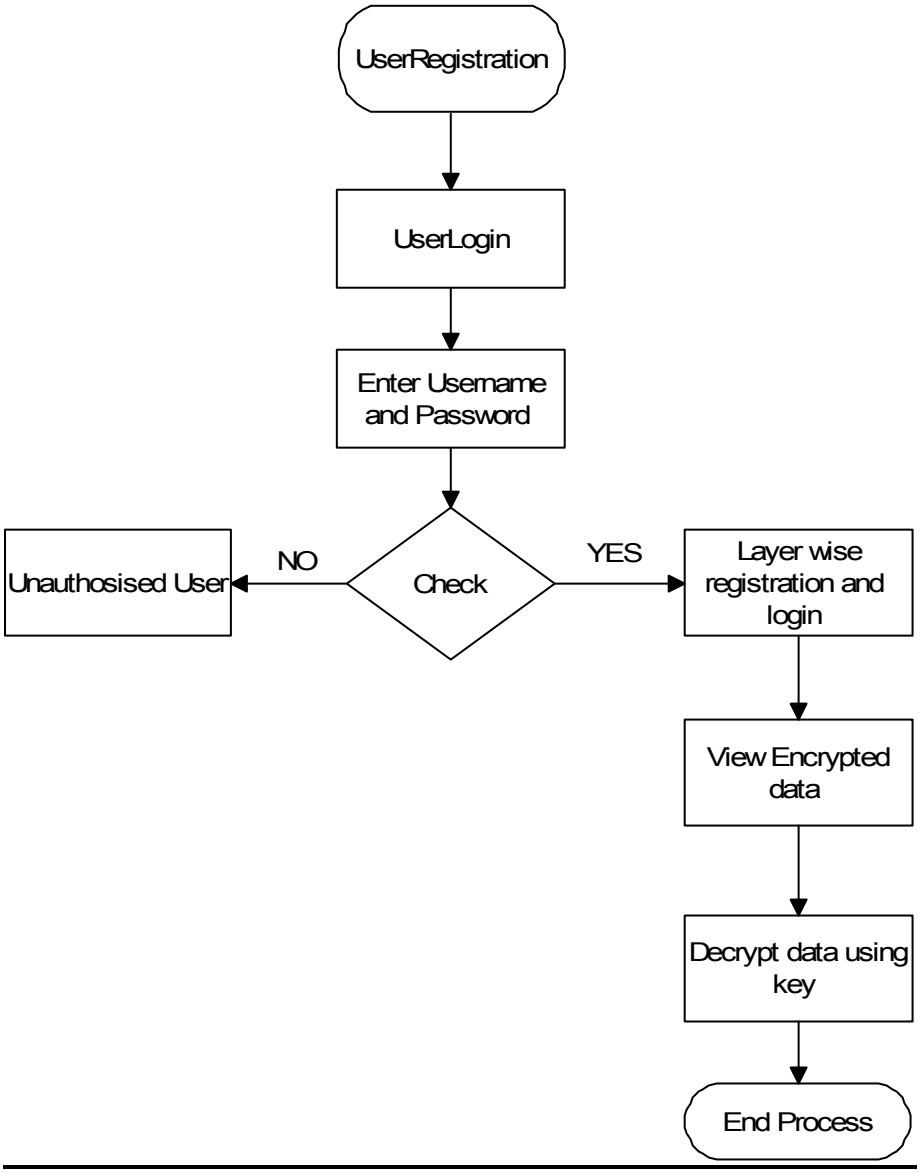
Data Flow Diagram / Use Case Diagram / Flow Diagram

The DFD is also called as bubble chart. It is a simple graphical formalism that

can be used to represent a system in terms of the input data to the system, various processing carried out on these data, and the output data is generated by the system.

Admin

User Login:



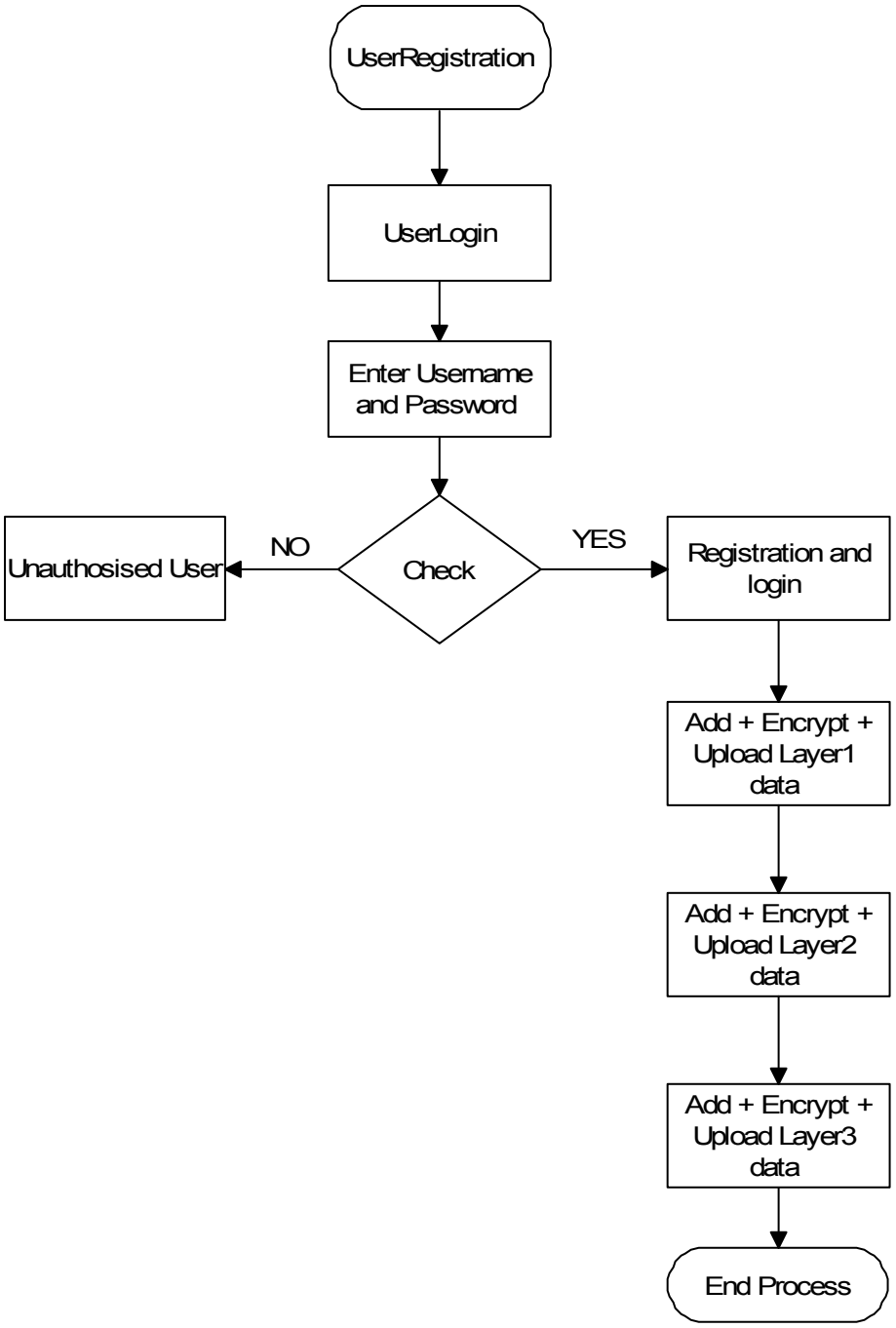


Fig 3.1 User Data Flow Diagram

3.2 SEQUENCE DIAGRAM:

User

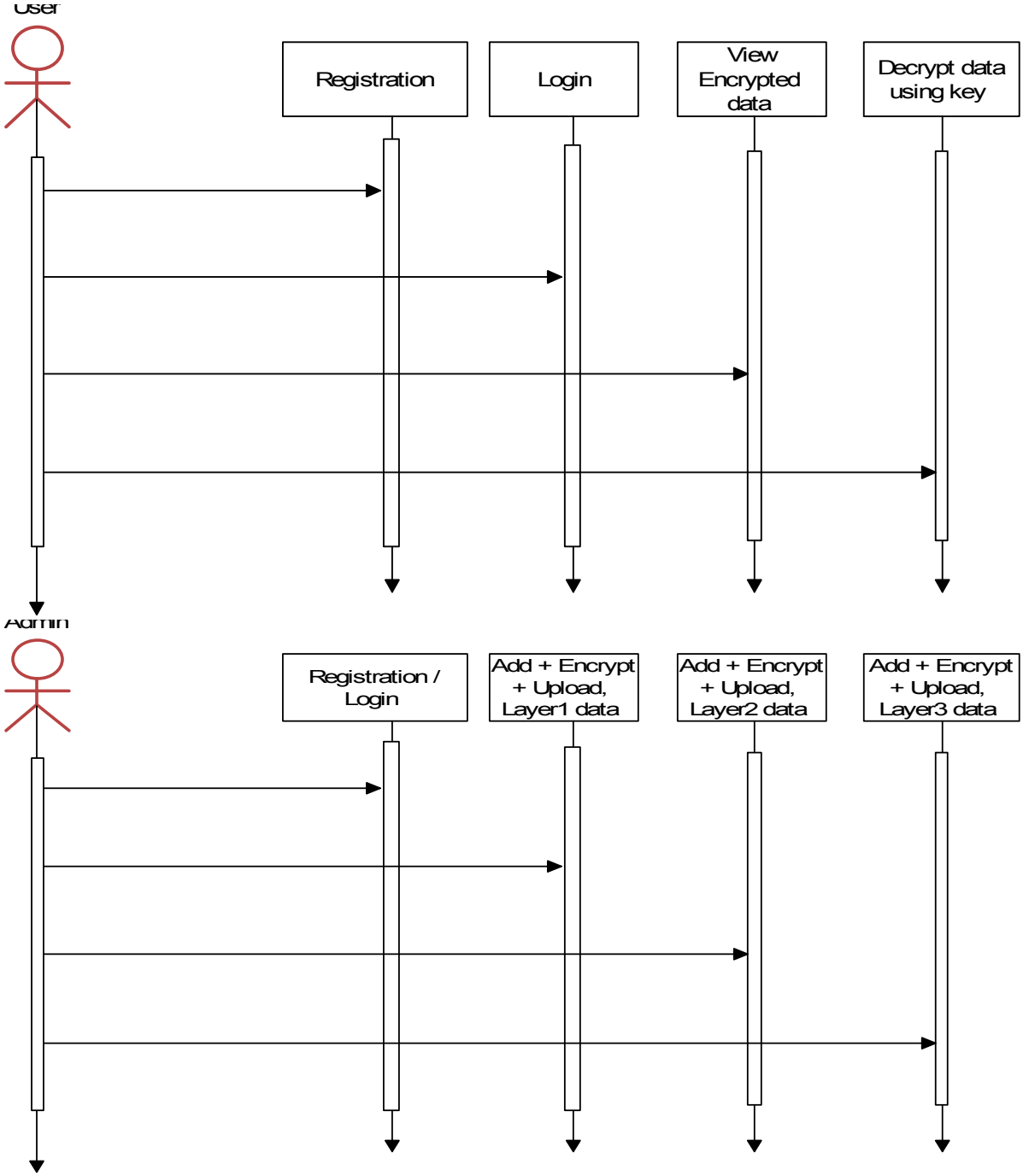


Fig 3.2 Sequence Diagram

4.Results And Discussions

Fig 4.1 Admin Register

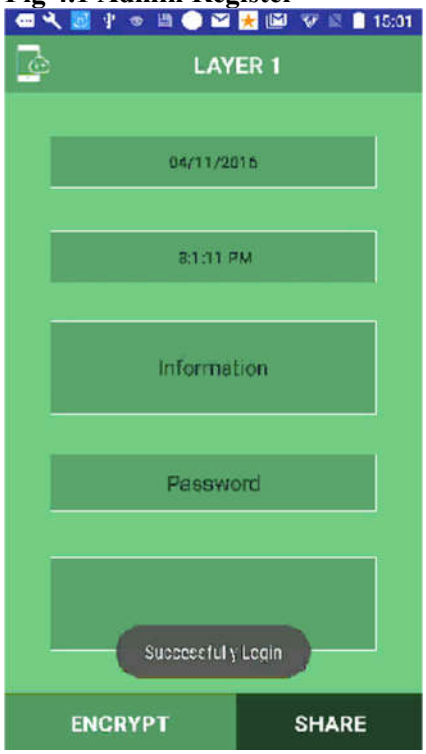


Fig 4.2 Layer 1

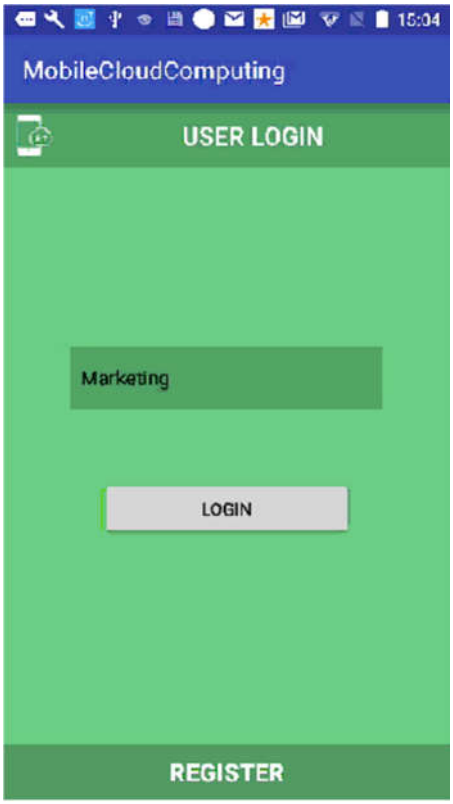


Fig 4.3 User Login

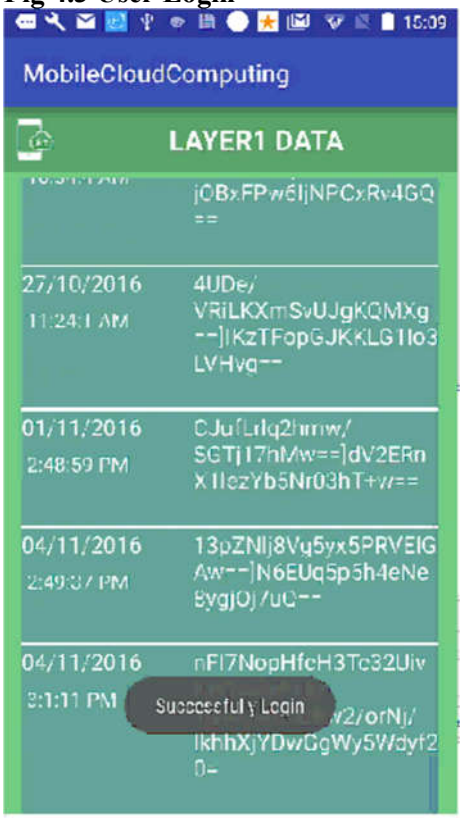


Fig 4.4 Encrypted Data

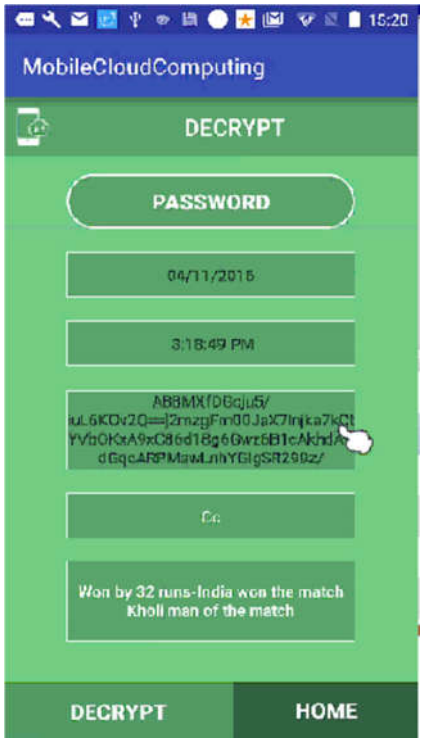


Fig 4.5 Decrypted data

5.Conclusion

In this paper, a hierarchical access control method using a modified hierarchical attribute-based encryption (M-HABE) and a modified three-layer structure is proposed. Differing from the existing paradigms such as the HABE algorithm and the original three-layer structure, the novel scheme mainly focuses on the data processing, storing and accessing, which is designed to ensure the application users with legal access authorities to get corresponding sensing data and to restrict illegal users and unauthorized legal users get access to the data, the proposed promising paradigm makes it extremely suitable for the mobile cloud computing based paradigm. What should be emphasized is that the most important highlight of all in the proposed paper can be described as that the modified three-layer structure is designed for solving the security issues illustrated above

References

[1] N. Fernando, S. W. Loke, and W. Rahayu, “Mobile cloud computing:
A survey,” Future Generation Computer Systems, vol. 29, no. 1, pp.
84–106, 2013.
[2] S. Abolfazli, Z. Sanaei, E. Ahmed, A. Gani, and R. Buyya, “Cloudbased
augmentation for mobile devices: motivation, taxonomies, and
open challenges,” Communications Surveys & Tutorials, IEEE, vol. 16,
no. 1, pp. 337–368, 2014.
[3] R. Kumar and S. Rajalakshmi, “Mobile cloud computing: Standard
approach to protecting and securing of mobile cloud ecosystems,” in

Computer Sciences and Applications (CSA), 2013 International Conference
on. IEEE, 2013, pp. 663–669.
[4] J. Carolan, S. Gaede, J. Baty, G. Brunette, A. Licht, J. Remmell, L. Tucker, and J. Weise, "Introduction to cloud computing architecture," White Paper, 1st edn. Sun Micro Systems Inc, 2009.
[5] E. E. Marinelli, "Hyrax: cloud computing on mobile devices using mapreduce," DTIC Document, Tech. Rep., 2009.
[6] Q. Han, S. Liang, and H. Zhang, "Mobile cloud sensing, big data, and 5g networks make an intelligent and smart world," Network, IEEE, vol. 29, no. 2, pp. 40–45, 2015.

Author's Profiles

Ms. ARI SAI VARSHINI Pursuing B.Tech in Computer Science and Engineering from Qis College of Engineering&Technology(Autonomous and NAAC 'A' Grade) Ponduru Road,Vengamukkapalem ,Ongole,Prakasam Distrinct. Affliation to Jawaharlal Nehru Technological University,Kakinada in 2015-2019,respectively.

Mr. DHULIPALLA SAIKRISHNA ,Pursuing B.Tech in Computer Science and Engineering from Qis College of Engineering&Technology(Autonomous and NAAC 'A' Grade) Ponduru Road,Vengamukkapalem ,Ongole,Prakasam Distrinct. Affliation to Jawaharlal Nehru Technological University,Kakinada in 2015-2019,respectively.

Ms. INAPAKOLLA MANJUSHA ,Pursuing B.Tech in Computer Science and Engineering from Qis College of Engineering&Technology(Autonomous and NAAC 'A' Grade) Ponduru Road,Vengamukkapalem ,Ongole,Prakasam Distrinct. Affliation to Jawaharlal Nehru Technological University,Kakinada in 2015-2019,respectively.

Mr SADHU BRAHMANANDA REDDY ,Pursuing B.Tech in Computer Science and Engineering from Qis College of Engineering&Technology(Autonomous and NAAC 'A' Grade) Ponduru Road,Vengamukkapalem ,Ongole,Prakasam Distrinct. Affliation to Jawaharlal Nehru Technological University,Kakinada in 2015-2019,respectively.

Mr.B Kishore Kumar has received his B.TECH and M.Tech.He is dedicated to teaching field from the last 7 years.He has guided 16 P.G AND 20 U.G Students.His Research included cloud computing at present He is working as Asst.Professor in QIS college of engineering and Technology