

Fig. 5 Class hierarchy for proposed research work

Fig. 8 focus on Learner class which shows the how the various subjects, data member and different properties are associated with it. Finally Fig. 9 the ontograf for the ComputerScience class with the data member, properties.

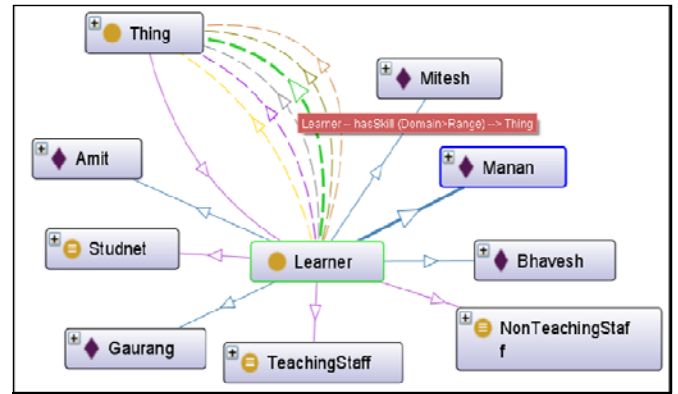


Fig. 8 OntoGraf for the Learner class

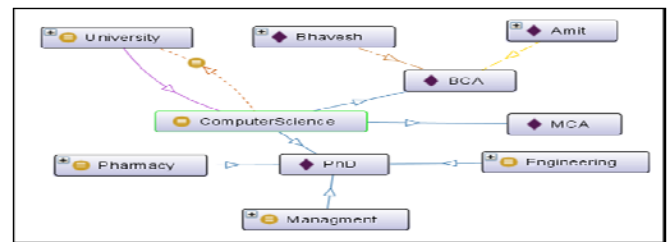


Fig. 9 OntoGraf for the ComputerScience class

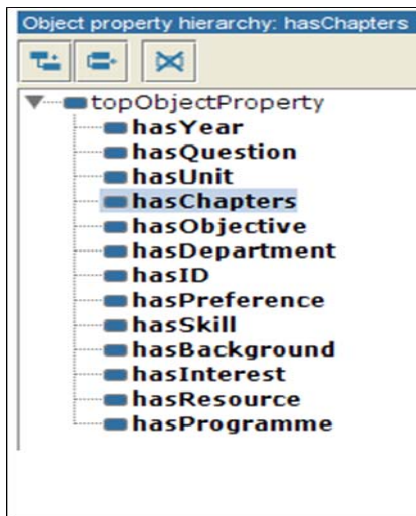


Fig. 6 Object Properties

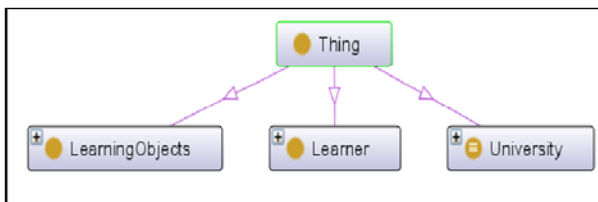


Fig. 7 OntoGraf for the three classes

VI. CONCLUSIONS

The proposed research work solve the limitation of current e-learning environment by providing most relevant learning resources to e-learner quickly. A learner need not require to discover, identify and categorize the learning resources which are provided by the proposed e-learning environment. Because the previous e-learning approach work on the predefined algorithm and software program, they are not enough powerful to understand the learner needs and requirements dynamically. This problem will solve in the proposed work because this new approach is based on semantic web technology and the e-learning resources are interrelated with each other in the sense of some relation in structured manner.

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REFERENCES

- [1] S. K. Patel, H. B. Bhadka, "Automatic Discovery and Presentation of highly Personalized E-learning Resources: A Survey," *International Journal of Advanced Technology & Engineering Research (IJATER)*, vol. 3, pp. 25–29, Mar. 2013.
- [2] N. Shadbolt, W. Hall, Tim Berners-Lee, "The Semantic Web Revisited," *IEEE Computer Society*, pp. 96–101. May-Jun. 2006.
- [3] G. Abraham. (2013) The Semantic Web Architecture. [Online]. Available: <http://semanticsage.blogspot.in/2013/03/the-semantic-web-architecture.html>
- [4] J. Hebel, M. Fisher, R. Blace and A. Perez-Lopez, *Semantic Web Programming*, M. Dean and M. Smith, Wiley, United States, 2011.
- [5] F. Colace, "Ontology for E-Learning: A Bayesian Approach," *IEEE TRANSACTIONS ON EDUCATION*, vol.53, pp. 223–233, May. 2010.
- [6] Y. Hong-yan, X. Jian-liang, W. Mo-ji, X. Jing, "Development of Domain Ontology for E-learning Course," *IEEE*, pp. 501–506. 2009.
- [7] (2013) The World Wide Web Consortium website. [Online]. Available: <http://www.w3.org/>
- [8] L. Rui, D. Maode, "A Research on E - learning Resources Construction Based on Semantic Web", in *2012 International Conference on Solid State Devices and Materials Science*, Elsevier, p. 1715 – 1719
- [9] T. Segaran, C. Evans, J. Taylor, *Programming the Semantic Web*, 1st ed., M. E. Treseler, O'Reilly, Jul. 2009.
- [10] T. Lendyuk, S. Rippa, "Information Portal of E-Learning System in Semantic Web Environment", in Proc. The 6th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications, 2011, paper 978-1-4577-1425-2/11, p. 637-641.
- [11] S. Ram Kannan, P. Saravanan, "Implementation of Ontology in Intelligent E-learning System Development based on Semantic Web," *International Journal of Research in Engineering & Advanced Technology*, vol. 1, pp. 1–6, Mar. 2013.