Abstract

Learning objects are one of the innovations in the domain of teaching technology. Shared and reusable learning objects are based on the understanding that content should be designed in a modular way rather than designed as a single integrated software. Learning objects are separate and independent objects, allowing each individual to create lessons in accordance with his or her own learning style or method, enabling the realization of customized learning. Since learning objects have descriptive information (metadata), they can be easily searched, so that they can access the learning content on time. The metadata definitions are made in the XML file. For this reason, learning objects can be shared with the use of XML, while the reuse of learning objects cannot be provided because XML is insufficient in the semantic definition of learning objects. Semantic Web (Web 3.0) technologies can be used to produce workable and interpretable web pages. Ontologies are being developed with the use of these technologies. Thanks to the ontology, intelligent learning environments can be developed to access the learning objects that are distributed on the web about each learning acquisition. In this study, according to the curriculum of Computer Engineering, ComputerEngineeringCurriculum learning
object ontology was defined. The defined learning object ontology provides better sharing and reusability of learning objects. Protégé ontology development editor was used for this purpose. This paper shows that learning environments developed using semantic web technologies and ontologies can offer intelligent solutions for individualized instruction and rapid access to accurate instructional content on the web.

References


Index Terms

Computer Science
Applied Sciences

Keywords

Learning objects, ontology, semantic web.