Chapter 3

Research Objective

3.1 Aim Of Research

The widespread use of programmed testing in grading reduces ranking time and allows evaluators to focus on issues such as code style. In this paper the focus is on the conjunction of computerized testing systems. This paper focuses on wide ranging systems in which exams are delivered and graded by a vital server. The objective of this work is to build exam management tool for students and instructors to monitor and enhance learning and teaching practices. Over the years, a variety of evaluation schema and systems have been proposed. And as information technology keeps improving, numerous of them have been transformed from traditional paper-and-pencil to computerized and web based format in recent years. It is necessary to build a Web-based examination system for institutions which has a large number of students like in Indian universities, as an effectual solution to mass learning and evaluation of basic undergraduate education. However, the previous Web-based exam system cannot support such functions. Evaluating the students through the Internet is one of the most difficult challenges in E-learning, as part of the modern development in the technology of education systems. Web-based Examination system could be used via Internet or intranet

The Semantic Web has triggered some new developments in knowledge engineering and machine learning, most notably the standardization of knowledge specifications. Standardized ontologies already serve as shared conceptual-knowledge skeletons, and declarative knowledge-processing specifications may soon be used to model tasks requiring common problem-solving skills such as procedure selection and application. Here, survey work can be divided into four main categories:
(a) Schema integration using ontologies,
(b) Schema mapping, and translating source data to RDF,
(c) Distributed query processing, and
(d) Similar projects addressing ontology-based data integration.
While schema integration is not a new topic in general (an overview can be found in),
ontology matching and alignment is rather new.

3.1.1 Software Development Methodology

Software process is the way in which we produce the software. Apart from hiring smart,
knowledgeable engineers and buying the latest development tools, effective software
development process is also needed, so that engineers can systematically use the best technical
and managerial practices to successfully complete their projects.
A software life cycle is the series of identifiable stages that a software product undergoes
during its lifetime.
A software lifecycle model is a descriptive and diagrammatic representation of the software
life cycle. A life cycle model represents all the activities required to make a software product
transit through its lifecycle phases. It also captures the order in which these activities are to be
taken.
There are various life cycle models to improve the software processes. In this, Waterfall
model is followed:
Fig 3.1 System flow in semantic performance based solutions
Fig. 3.2 Complete Data Flow Diagram
The system is broadly classified into three main modules of pre-examination, the real time m
(i) Pre-examination:- The question database is composed of the questions, a set of possible answers, the
question types and other metadata, which are indexed by several factors, such as topics, keywords, complexity
and difficulty, etc. The prior sets of journey of examination to cover up in an organized manner are the
following :-
1. Registration & creation of login through student Id,teachers
2. Q bank which are questions distributed to the formative assessment on the course of syllabi.
3. Integrated keys based on semantic technique which is bounded with auto grading.
4. All questions are divided into topic.
5. Schedule of exams
(ii) Real Time Screen Examination: - Requires students not to leave the computer during the test by user id,
password authenticated tracking technology. The data transmission encryption system transmits the
examination question and result in secret form through the network to the server. It has following job to control a) Real time attempt b) time control and management

iii) Post Exam

a) Auto grading (php mysql)

b) Submission system

Teacher Application: The faculty section is responsible for the assignments and test uploading. For this prior to the test faculties are creating question banks and answer solutions to them. The questions provided in conjunction with the syllabus are assessed and then uploaded using intelligent tailor made integrated evaluation system.

Marking the test is done automatically and instantaneously; the faculty is relieved from these, time consuming duties. Questions can be easily cast-off from the question bank, easily edited and changed, different versions of the same question can be generated for different students.

Moreover the faculties has an acumen to evaluate on the IQ skills of the students to help them select the proper stream of their career.

Students Application: Tests can be taken in a prior scheduling according to the academic calendar conceptualized in a planned order & can be taken anywhere. Questions can be attempted in a peaceful environment, it can be taken using an undemanding personal computer and the minimal requirement is just a Web browser. Questions can be visualized with unique visual effects such as 3D, and objects in motion can be viewed.
Fig 3.4 Level 3 DFD for institute