

**HIGHER TECHNICAL INSTITUTE**

**COURSE IN COMPUTER STUDIES**

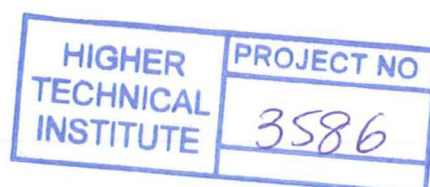
**DIPLOMA PROJECT**

**A WEB BASED TEST DEVELOPMENT, MANAGEMENT  
AND DELIVERY SYSTEM**

**CS/339**

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# 1. INITIAL INVESTIGATION PHASE

## 1.1 Initial Investigation

### 1.1.1 Project objective

The purpose of this project is to design and implement a web based system that will give the opportunity to the users, to test their knowledge and their skills on various subjects which are of interest to them.

Generally the system will have the ability to introduce predefined tests which can be modified and amended by the teachers and administrators of the system. Examples of users may be a) any company which operates in the area of testing and placing people in various positions within companies needing trained personnel, b) any person who likes to test his/her general knowledge, c) any student requiring tests on specific subjects etc.

Briefly the following points outline the basic objectives and parameters of the project:

- To construct a questionnaire with various levels of difficulty.
- An efficient system able to handle questions in different categories and levels of difficulty.
- Ability to evaluate the answers of the examinees, indicate the number of correct answers and create statistics based on the score achieved and time taken.
- Tests may be taken by all types of users. Results will be stored and statistics will be announced to the user's profile.
- Able to handle various processes such as:
  - Online registration of various types of users (teachers and students). Each type having different objectives and abilities.
  - Generation of random tests according to the criteria entered by the user taking a test i.e. subject category, education level, difficulty level and type of question.

- Creation of four different types of questions (i.e. Matching, True/False, Fill in the blanks and Multiple choice).
- Tests will have the following characteristics and limitations:
  - Time
  - Level of difficulty.
  - Education level.
  - Categories of questions (Specific or random).
- Reports considering the results of the examinees will be generated and can be viewed only by the administrator and the teachers. Statistics will also be available for the examiner considering the tests taken.
- To construct a user friendly environment.
- Easy to operate and learn.

### 1.1.2 Categories of users

People of any age, nationality, educational level and country will be able to test their knowledge on a variety of subjects, type of questions and difficulty levels generated by the system.

People can easily get into the internet and visit the website of our system and after registration will be able to try different types of tests based on some predefined criteria. The system will also give the possibility to the visitors of the website to solve a sample test which can only be modified by the administrator.

Users may be divided into three main categories as follows:

- The **administrator**, who is the “manager” of the system. He has all the privileges granted and is the only person able to register the “teachers” users.
- The **registered users** which are divided into two subcategories:
  - **Students:** Can take a test based on criteria given by the system and get statistics and results based on his answers.
  - **Teachers:** Can also take tests and given results like students, but will also have the access to create, maintain and have a lookup on questions held in

the database. Another issue that teachers can have is that they can view the students progress and get test evaluation reports.

- The **unregistered users** which is the last category of people who are only able to solve various sample tests created by the administrator and provide results on that test.

### **1.1.3 Information about the work**

Questions of any type, difficulty level and category will be entered in the database by the teachers and the administrator. The administrator will also be able to write announcements and news which will appear in the main page.

The system will generate the tests according to the entered information and will be presented to any student or teacher who is registered to the website and wants to take a test.

The non-registered visitors will have the opportunity to read the news and announcements and also if they want to try a sample test and take a score.

### **1.1.4 Information gathering**

The following web sides were used in their general context in providing information used in developing our web system.

#### **tickle.com:**

Tickle was founded in 1999 as Emode.com by CEO James Currier, who developed an early passion for Internet technology, new media and social sciences. Currier envisioned how the Internet could be used to help people learn more about themselves and better connect with others in a mutually beneficial environment based on trust and respect.

Today, the company employs more than 50 people and is headquartered in San Francisco, CA.

Tickle was the first company to combine consumer insight with state-of-the-art digital technology to generate personality reports uniquely positioned to offer outstanding results. The company offers more than 200 tests (more than 60 of which are PhD-certified) and is the leading provider of online testing services.

[www.tickle.com](http://www.tickle.com)

*(View Appendix D, page 1)*

**queendom.com:**

Since the beginning of 1996, Queendom has evolved into one of the most active and fastest growing communities on the web. Queendom's creative team of psychologists, designers, writers and programmers share a common vision - to create a special relationship with its readers. QueenDom.com is one of the most popular on the web in the Mental Health and Psychology category.

Queendom provides an interactive avenue for self-exploration with a healthy dose of fun and thus the motto *serious entertainment*. Queendom develops its own professional quality interactive tests, giving users the opportunity to look into their own personality, relationships, intelligence and health. But Queendom does not stop there. It offers advice, community, surveys and trivia quizzes on every subject imaginable.

[www.queendom.com](http://www.queendom.com)

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Appendix C4 – (Process Description)

Appendix D – (Information Gathered)

Appendix E – (Software Used)