

# ONLINE EXAMINATION SYSTEM USING PYTHON

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## ABSTRACT

Online Exam System for introduction to management is an application that designed and developed for students and lecturers. The system helps students to take examination online. It helps also lecturers to upload the questions and answers in the database and they can see the students who fail or pass the exam. The software is developed using Python programming language and database.

In the software we can register as a user and users are of two categories which are Lecturer and Student. Before using the system both users need to register and after that they must login with their username and password in order to enter the system. The online examination system for introduction to management is constituted of different components for instance login function, insertion of data in the database, extraction of data from the database.

**The problem with the current system is that students take their exam manually. This outdated system will take long time utilization; the manual procedure used for conducting exam is time consuming process. More time being used for lecturers to bring the questions papers and answer sheets and also more time is needed for students in order to write their exam.**

## 1 INTRODUCTION

Computerized and online systems have been increasing in every aspect of education. Information Technology plays a very important role in nowadays education. Computers and internet have made dramatic changes in the education system. Information technology enables institution of high learning to save time and money, and allow the delivery of education with easiness, anywhere, and anytime. Paper based books are replaced by online and off-line applications. With computer software, we can be able to have access to huge databases of information. This gives fundamental change to the education. Information technology makes the exchanges of information fast and easily. In the modern era, technological progress has minimized the information in the world. Advancement of technology has many advantages in education and all business industries that use it. With the use of the technology advances, the transaction became more rapid, accurate and efficient.

## 2 LITERATURE SURVEY

### Introduction

Computerized systems have been increasing in education nowadays. Information Technology plays a very important role in education. Computers have made dramatic changes in the learning system. Information technology enables education institutions to save space and time, and allow the delivery of education services with easiness, anywhere, and anytime. For instance physical libraries are replaced by online libraries available to anyone; anywhere in the world students can interact with lecturers online whether live or via video. With computer software, we can be able to have access to huge databases of information. This gives fundamental change to the education system. Information technology makes the exchanges of information fast and easily.

With the growth of IT a lot of data can be found in online library. We don't need to have a physical library in order to read books. Computers are a powerful tool used in all aspects of our studies. We use multimedia technologies to convey ideas, build projects.

Information technology enables students to do distance learning, method of learning at a distance instead of learning in a classroom. Communications technologies create possibilities, both individual and institutional, for an unprecedented expansion of home-based learning, much of it part-time.

Information technology provides systems that allow students to perform many tasks in an automatic way and not manually. Students can take exam using computerized system; they don't need paper-based exam. They save time and money when using computer system in their studies.

#### . Examples of Exam Systems Info solutions Goa

They provide an online Examination System to universities. It is a web-based system developed in python and sqlite. The examination consists of different types of multiple choice questions. The questions are selected at random keeping the proper weightage for the various topics. The answers are evaluated and the marks obtained for each along with the answer given by the student are stored in the database. The examiner can get the results immediately in various forms - the general marklist, the detailed general mark list where the marks obtained by the student in each topic of the subject is shown as well as the answer sheet of each student. The trends graph show the graph of how many students have passed in each topic of a particular subject as well as how many students have passed in each subject . There is also the provision for a Trends graph of comparing how many students have passed topic wise in each subject at the midterm as well as final exams if there are two exams for the subject.

The software maintains the details for each student as well as provides a facility for editing the student details if required. There is Password based access for Individual Answer Sheet, General Mark Lists and Trends Graphs. Authentication is provided Via Sessions and the password is stored in encrypted form (MD5 hash) in the database.

This Online Examination System in Python and Sllite can be modified and customized to suit the need of any Educational Institutions, Primary and Secondary Schools, Colleges, Professional and Vocational Institutes, Universities or Training Academies. This software is particularly suited to conduct competitive exams like recruitment exams and Common Extrace Tests (CET) of various states as it will save valuable time spent on assessing the answer books and the results can be obtained immediately.

#### Computerized Systems

Technology advances so fast that computers become part of our daily live. People use computers everywhere, at work, at school and at home. The computerized systems are very efficient, process huge amount of data and keep big amount of information.

Malolos ET .al (2002) says that the automated systems are important as the time and manual efforts are minimized.

Janes(2001) elaborated that computers are devices that are greatly reliable and very powerful. He said that computers possess three advantages compared to other equipments in the office. The computers have these three benefits in the sense that they are faster, more accurate and more economical.

Reyes (2005) stated that perform work manually is time consuming. But using computers make our task more practical.

In Flores (2002) point of view, he defined automation as the replacement of machine control of human.

According to Dioso (2001), computer helps in planning, organizing and controlling in an intelligent manner.

In Ralph M. Stair (1999) point of view, the growing of technology helps people to perform a lot of tasks with less effort.

Gurewich (1999) said that in any corporation the work is done faster when using database system. With the use of computerized system everything is done faster compared to tasks that are performed in a manual way.

Mane (2000) said that the invention of the computer made the task easier to perform than by doing it manually. The computer is very necessary for everyone and it is very god productivity machine. The data are stored in the computer and users can access the information whenever they are in need.

Bryan (2006) defined the information as a set of people, procedures and resources that collects processes and distributes information in an organization. They consist of simple manual information system and as well as computer based information system that uses hardware, software telecommunication and other forms of information technology.

Sender (2002) referred computers as an intelligence amplifier that can free human to use their time effectively. Computers perform tasks with high speed and accuracy.

Thowsand (2005) defined database system as a structured set of data. These data can be about people, products or event.

Adamski (2007) highlighted the benefits of database by saying it is economical, a lot of information can be retrieved from some

amount of data, and there is control of redundancy, integrity, security, flexibility, responsiveness, improvement of maintenance and data independence.

### 3 EXISTING SYSTEM

Existing system is a manual one in which users are maintaining books to store the information like Student Details, Instructor Details, Schedule Details and feedbacks about students who attempted exam as per schedule.. It is very difficult to maintain historical data.

Disadvantages:

- ⊗ A lot of copies of question papers have to be made
- ⊗ A lot of correction work hence delay in giving the results
- ⊗ A lot of tabulation work for each subject results..

### 4 PROPOSED WORK AND ALGORITHM

This application is used to conduct online examination. The students can sit at individual terminals and login to write the exam in the given duration. The questions have to be given to the students. This application will perform correction, display the result immediately and also store it in database. This application provides the administrator with a facility to add new exams. This application provides the instructor add questions to the exam, modify questions in the exam in a particular exam. This application takes care of authentication of the administrator, Instructor as well as the student.

Advantages Of Proposed System:

Online Examination Tool is to provide better information for the users of this system for better results for their maintenance in student examination schedule details and grading details.

### 5 METHODOLOGIES

#### Python :

Introduction to Python : Nowadays, Python is in great demand. It is widely used in the software development industry. There is 'n' number of reasons for this.

- High-level object-oriented programming language: Python includes effective symbolism.
- Rapid application development: Because of its concise code and literal syntax, the development of applications gets accelerated. The reason for its wide usability is its simple and easy-to-master syntax. The simplicity of the code helps reduce the time and cost of development.
- Dynamic typescript: Python has high-level incorporated data structures blended with dynamic typescript and powerful binding.

#### 3.3.1.2. PyCharm

- PyCharm is a hybrid platform developed by JetBrains as an IDE for Python. It is commonly used for Python application development. Some of the unicorn organizations such as Twitter, Facebook, Amazon, and Pinterest use PyCharm as their Python IDE.

It supports two versions: v2.x and v3.x.

We can run PyCharm on Windows, Linux, or Mac OS. Additionally, it contains modules and packages that help programmers develop software using Python in less time and with minimal effort. Further, it can also be customized according to the requirements of developers.

Features of PyCharm:

Below, we have compiled some of the essential features provided by PyCharm.

Django:

Django is a Python framework that makes it easier to create web sites using Python. Django takes care of the difficult stuff so that you can concentrate on building your web applications. Django emphasizes reusability of components, also referred to as DRY (Don't Repeat Yourself), and comes with ready-to-use features like login system, database connection and

CRUD operations (Create Read Update Delete). Django is especially helpful for database driven websites.

### SQL Lite 3

A standalone command-line shell program called sqlite3 is provided in SQLite's distribution. It can be used to create a database, define tables, insert and change rows, run queries and manage an SQLite database file.

## 6 RESULTS AND DISCUSSION

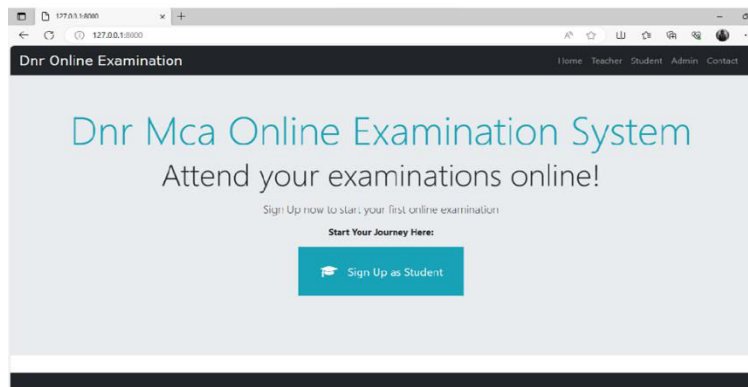


FIG1 :HOME SCREEN

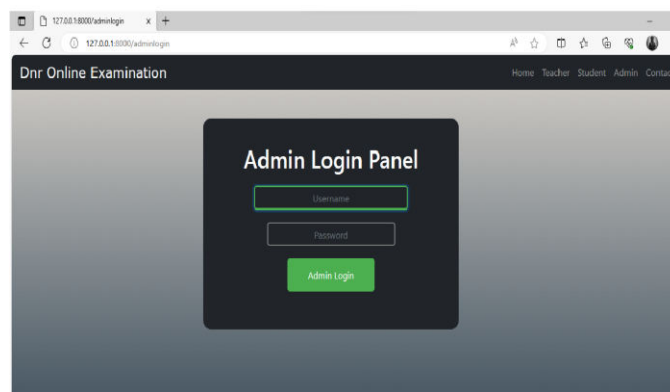


FIG 2:ADMIN PAGE

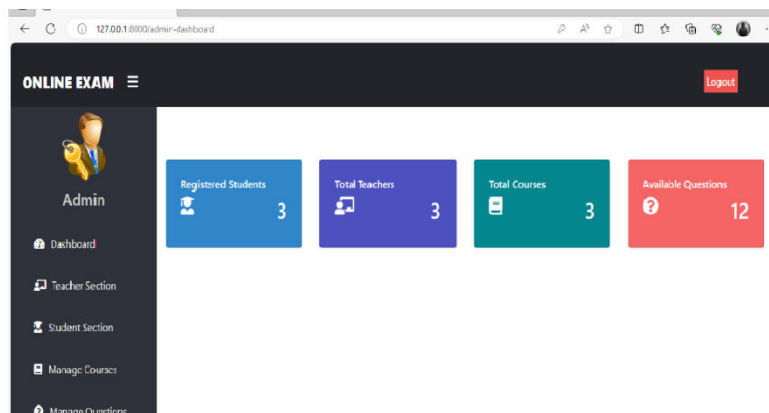


FIG 3: ADMIN PAGE PANEL

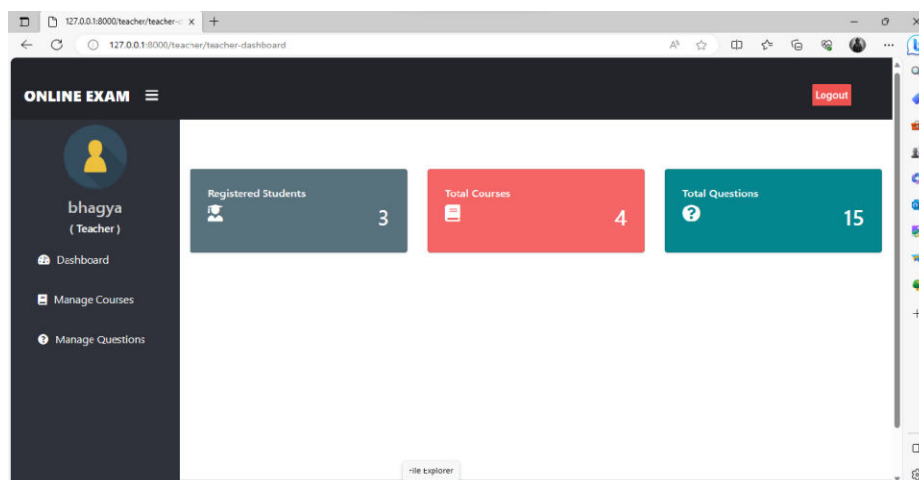


FIG 3: TEACHERS PAGE PANEL

The screenshot shows a web browser window with the URL 127.0.0.1:8000/student/student/signup. The page is titled 'Dnr Online Examination' and has a navigation bar with links for 'Home', 'Teacher', 'Student', 'Admin', and 'Contact'. The main content is a 'Student Signup Form' with the following fields: 'First Name', 'Last Name', 'Contact' (with a sub-field for 'Contact Number'), 'Address', 'Username' (with a placeholder 'username'), 'Password' (with a placeholder 'password'), and 'Profile Picture' (with a 'Choose File' button and 'No file chosen' text). A green 'Sign Up' button is at the bottom left.

FIG 4: STUDENT REGISTRATION PAGE PANEL

The screenshot shows a web browser window with the URL 127.0.0.1:8000/student/start-exam/3. The page has a dark sidebar on the left with a user profile for 'kumar (Student)' and navigation links for 'Dashboard', 'Examination', and 'My Marks'. The main content area shows 'Course: python' and two exam questions. Question 1 is 'Who developed Python Programming Language?' with a value of '[1 Marks]' and four radio button options: 'Wick van Rossum', 'Rasmus Lerdorf', 'Guido van Rossum', and 'Niene Stom'. Question 2 is 'Which type of Programming does Python support?' with a value of '[1 Marks]' and three radio button options: 'object-oriented programming', 'structured programming', and 'functional programming'.

FIG 5: STUDENT EXAM PAGE PANEL

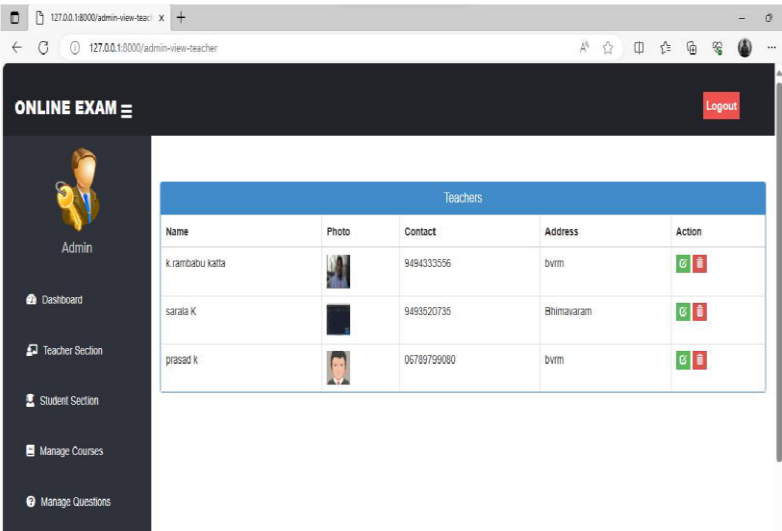


FIG 6: STUDENTS LIST

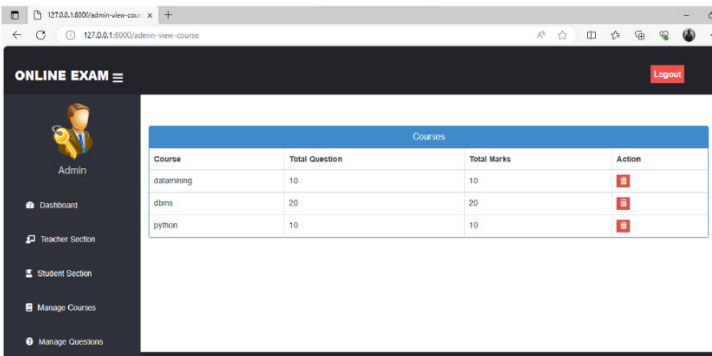


FIG 7: COURSE LIST

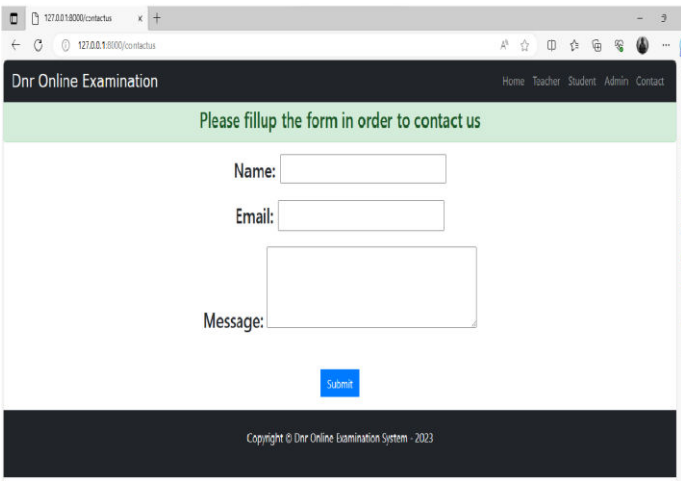


FIG 8: CONTACT LIST

## 6.CONCLUSION

With the completion of this project I conclude that it has achieved its purpose. The whole project provides a base for students to take their exam using software and allow lecturers to add questions and answers into the system. The system is developed using Python programming language and data are saved in the database.

Online examination system for introduction to management course is the best compared to paper-based exam. The automated system helps students and lecturers to save time and makes the process faster. It saves space since answers papers will not be used. With a user friendly system that has security, integrity and the database is neither inconsistent nor redundant

## 7 REFERENCES

1. Y. LeCun, Y. Bengio, and G. Hinton, "Deep learning", *Nature*, 521(7553):436–444, 2015.
2. O. Deniz, G. Bueno, J. Salido, and F. D. la Torre, "Face recognition using histograms of oriented gradients", *Pattern Recognition Letters*, 32(12):1598–1603, 2011.
3. C. Geng and X. Jiang, "Face recognition using sift features", *IEEE International Conference on Image Processing(ICIP)*, 2009.
4. Rohit Satle, Vishnuprasad Poojary, John Abraham, Shilpa Wakode, "Missing child identification using face recognition system", *International Journal of Advanced Engineering and Innovative Technology (IJAEIT)*, Volume 3 Issue 1 July – August 2016.
- 5.<https://en.wikipedia.org/wiki/FindFace>
- 6.<https://www.reuters.com/article/us-china-trafficking-apps/mobileapp-helps-chinarecover-hundreds-of-missing-childrenidUSKBN15J0GU>
7. Simonyan, Karen and Andrew Zisserman, "Very deep convolutional networks for large-scale image recognition", *International Conference on Learning Representations (ICLR)*, April 2015.
8. O. M. Parkhi, A. Vedaldi, and A. Zisserman, "Deep Face Recognition," in *British Machine Vision Conference*, vol. 1, no. 3, pp. 1-12, 2015.
9. A. Vedaldi, and K. Lenc, "MatConvNet: Convolutional Neural Networks for MATLAB", *ACM International Conference on Multimedia*, Brisbane, October 2015.