



Coding Assessment Portal

M Kanakeshwar Reddy¹, Murinelli Sudhir², Tripathi Prasu Kumar³, Kankurthi Santosh Kumar⁴, E Swathi⁵

^{2,3,4,5} UG Scholars, Department of CSE, **AVN Institute of Engineering and Technology**, Hyderabad, Telangana, India.

¹ Assistant Professor, Department of CSE, **AVN Institute of Engineering and Technology**, Hyderabad, Telangana, India.

Abstract:

The purpose of on-line test simulator is to take online test in an efficient manner and no time wasting for checking the paper. The main objective of on-line test simulator is to efficiently evaluate the candidate thoroughly through a fully automated system that not only saves lot of time but also gives fast results.

For students they give papers according to their convenience and time and there is no need of using extra thing like paper, pen etc.

Introduction

SCOPE:

Scope of this project is very broad in terms of other manually taking exams.

Few of them are:-

- This can be used in educational institutions as well as in corporate world.
- Can be used anywhere any time as it is a web based application (user Location doesn't matter).
- No restriction that examiner has to be present when the candidate takes the test.

FEATURES:

- Secure
- Easy to use
- Reliable and accurate
- No need of examiner

OVERVIEW:

The online test created for taking online test has following stages

- Login
- Test
- Result

Login:-

There is a quality login window because this is more secure than other login forms as in a normal login window there are multiple logins available so that more than one person can access to test with their individual login. But in this project there is only one login id i.e. administrator id and password by which a person enters the site. Hence it is more secure and reliable than previously used on-line test simulators.

TEST:

Test page is the most creative and important page in this project. It



consists of 2 modules namely:

- ❖ Subject selection
- ❖ Utilities

Subject selection:-

From the given choices the candidate can select his field (like JAVA and python etc) for taking on with the test.

Utilities:-

It includes:-Skip and come back to the question afterwards if needed.

Gives the list of attempted and unattempted questions and can go to any question directly and can either attempt or change the answer of the already attempted question.

FEASIBILITY STUDY

1.) ECONOMIC FEASIBILITY

Economic analysis is most frequently used for evaluation of the effectiveness of the system. More commonly known as cost/benefit analysis the procedure is to determine the benefit and saving that are expected from a system and compare them with costs, decisions is made to design and implement the system.

This part of feasibility study gives the top management the economic justification for the new system. This is an important input to the management the management, because very often the top management does not like to get confounded by the various technicalities that bound to be

associated with a project of this kind. A simple economic analysis that gives the actual comparison of costs and benefits is much more meaningful in such cases.

In the system, the organization is most satisfied by economic feasibility. Because, if the organization implements this system, it need not require any additional hardware resources as well as it will be saving lot of time.

2.) TECHNICAL FEASIBILITY

Technical feasibility centers on the existing manual system of the test management process and to what extent it can support the system.

According to feasibility analysis procedure the technical feasibility of the system is analyzed and the technical requirements such as software facilities, procedure, inputs are identified. It is also one of the important phases of the system development activities.

The system offers greater levels of user friendliness combined with greater processing speed. Therefore, the cost of maintenance can be reduced. Since, processing speed is very high and the work is reduced in the maintenance point of view management convince that the project is operationally feasible.

3) BEHAVIOURAL FEASIBILITY

People are inherently resistant to change and computer has been known to facilitate changes. An estimate should be made of how strong the user is likely to move towards the development of computerized system. These are various levels of users in order to ensure proper authentication and authorization and security of sensitive data of the organization.

EXISTING SYSTEM

The whole process of assigning test and evaluating their scores after the test, was done manually till date. Processing the test paper i.e. checking and distributing respective scores used to take time when the software was not installed.

DISADVANTAGES OF CURRENT SYSTEM

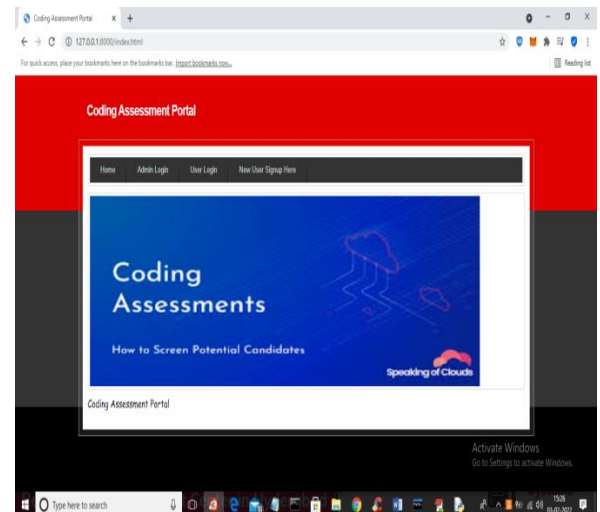
- The current system is very time consuming.
- It is very difficult to analyze the exam manually.
- To take exam of more candidates more invigilators are required but no need of invigilator in case of on line exam.
- Results are not precise as calculation and evaluations are done manually.
- The chances of paper leakage are more in current system as compared to proposed system.

Result processing takes more time as it is done manually

CHARACTERISTIC OF THE PROPOSED SYSTEM

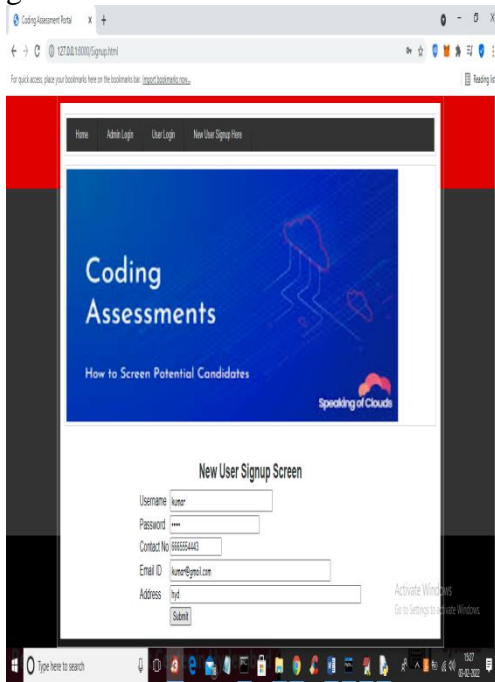
The online test created for taking online test has following features

- In comparison to the present system the proposed system will be less time consuming and is more efficient.
- Analysis will be very easy in proposed system as it is automated
- Result will be very precise and accurate and will be declared in very short span of time because calculation and evaluations are done by the simulator itself.
- The proposed system is very secure as no chances of leakage of question paper as it is dependent on the administrator only.
- The logs of appeared candidates and their marks are stored and can be backup for future use

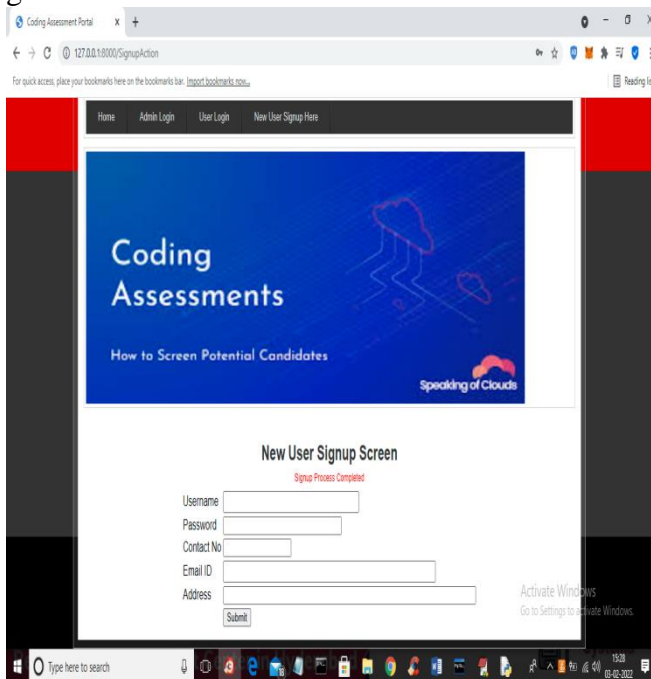


In above screen click on 'New User Sign Up Here' link to add new user and to

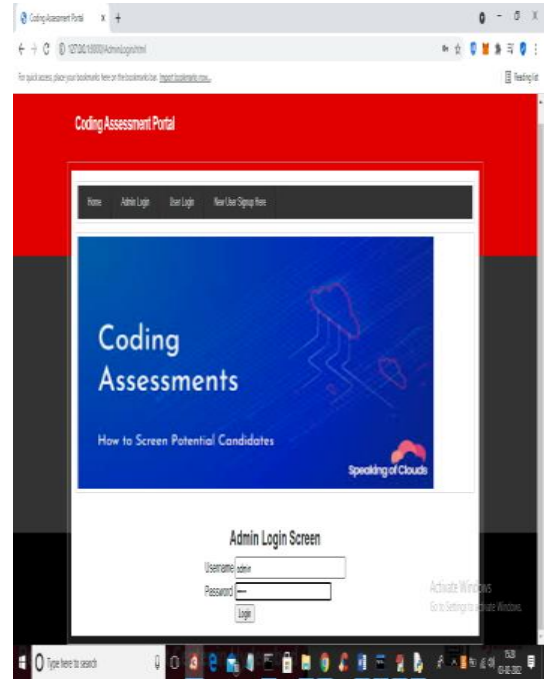
get below screen



In above screen user is entering signup details and then press 'Submit' button to get below screen



In above screen in red colour text we can see signup process completed and now click on 'Admin Login' link to get below screen



In above screen admin is login and after login will get below screen



In above screen admin can click on 'View Registered Users' link to get below output



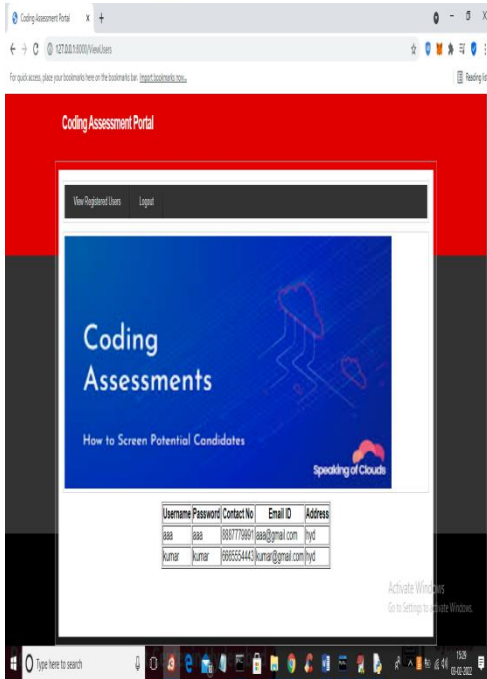
IJARST

International Journal For Advanced Research In Science & Technology

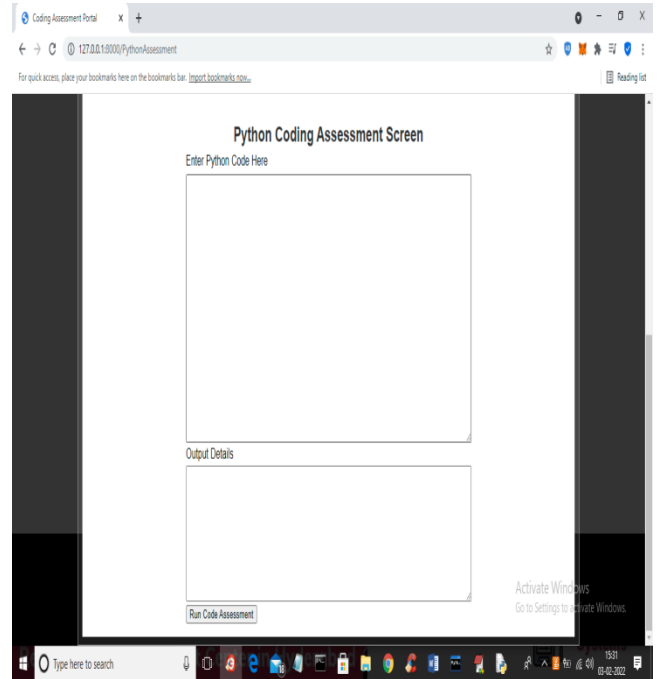
A peer reviewed international journal

www.ijarst.in

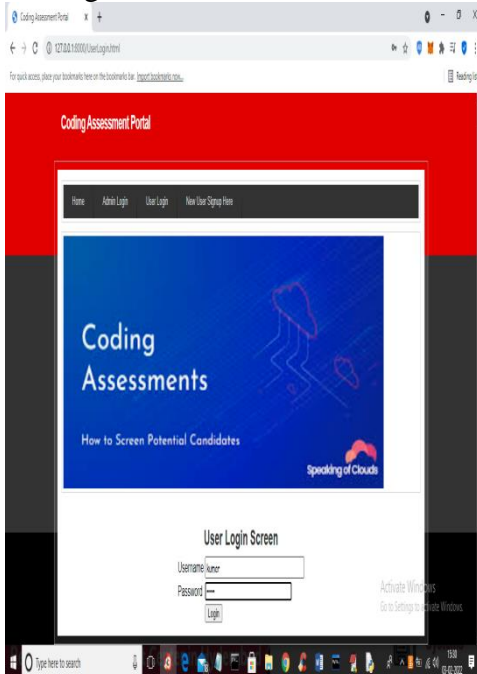
ISSN: 2457-0362



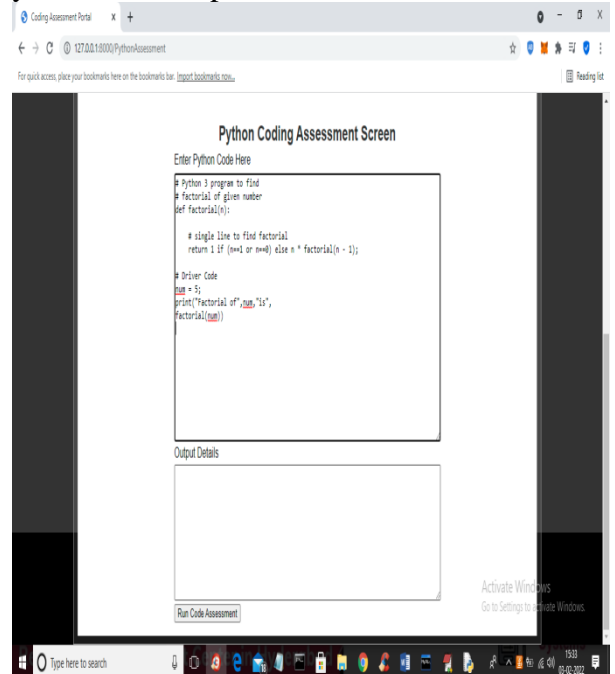
In above screen admin can view all registered user details and now logout and login as kumar user



In above screen in first text area you can enter python code and in second text area you can see output

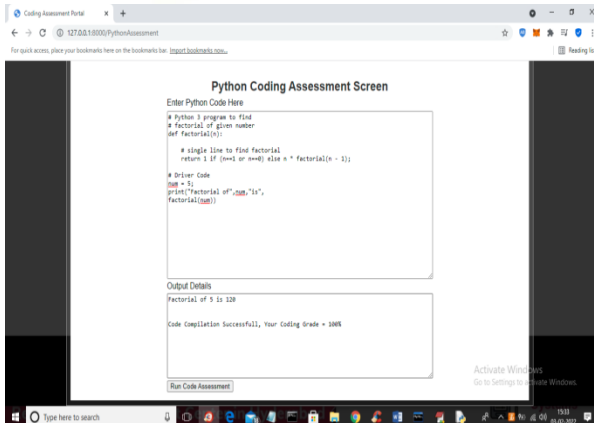


In above screen user is login and after login will get below screen

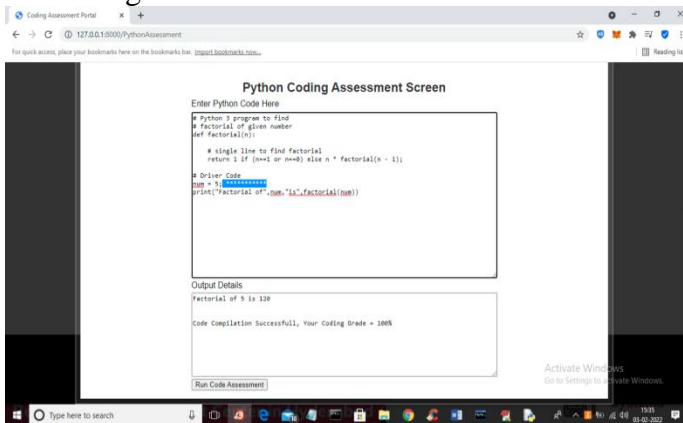


In above screen I entered some factorial program and now press 'Run Code Assessment' button to get below output

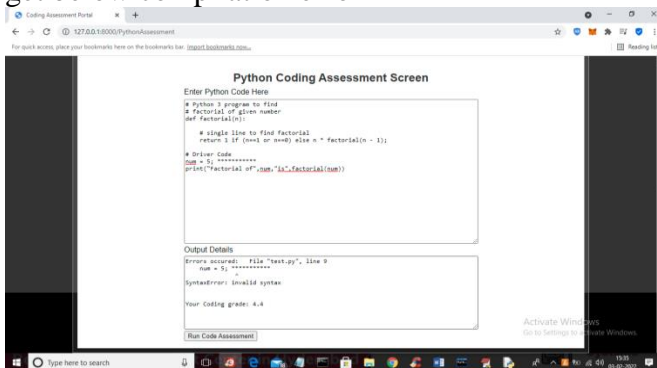
In above screen user can click on 'Python Assessment' link to get below screen



In above screen in second text area we got output as 'Factorial of 5 is 120' and we got message as Code Compilation Successful and got grade as 100% and now put some error in code and then execute again



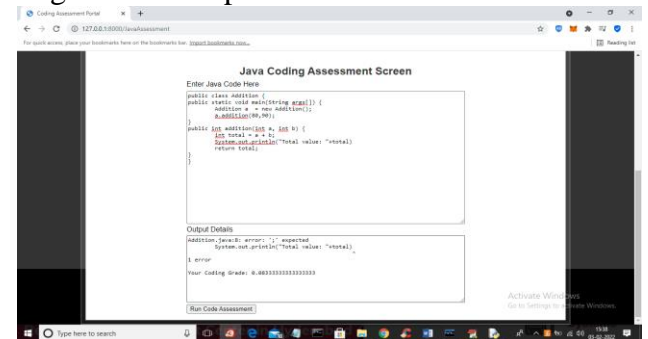
In above screen in blue colour text you can see I added some garbage * symbols which are not valid and press button to get below compilation error



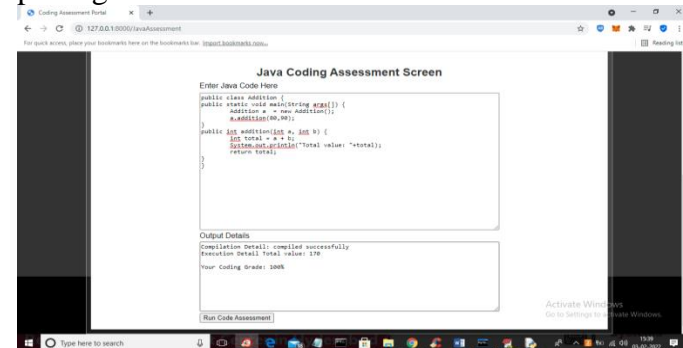
In above screen in second text area we got error details and we got grade as 4.4% and similarly you can test other

programs also. Now click on 'Java Assessment' link to get below screen

In above screen in first text area you can enter java program and in second text area u will see error or output details
In above screen I entered some addition of 2 numbers program and press button to get below output



In above screen I got error as I forgot to put ';' after System.out. statement and now I will run same program after putting semicolon



In above screen program got compiled and got addition output as 170 and got grade as 100% as program compiled successfully

Conclusion

The On line Coding Assessment Portal is developed using Python and Mysql fully meets the objectives of the system for which it has been developed. The system has reached a steady state where all bugs have been eliminated. The system is operated at a high level of efficiency and all the



teachers and user associated with the system understands its advantage. The system solves the problem. It was intended to solve as requirement specification.

Future Scope

Scope of this project is very broad in terms of other manually taking exams. Few of them are:-

- This can be used in educational institutions as well as in corporate world.
- Can be used anywhere any time as it is a web based application(user location doesn't matter).
- No restriction that examiner has to be present when the candidate takes the test.

Bibliography

1. A. Gomes, F. B. Correia and P. H. Abreu, "Types of assessing student-programming knowledge", in *Proceedings - Frontiers in Education Conference*, vol. 2016-Novem, no. October, 2016.
2. S. Srikant and V. Aggarwal, "Automatic grading of computer programs: A machine learning approach", *Proceedings - 2013 12th International Conference on Machine Learning and Applications*, vol. 1, pp. 85-92, 2013.
3. G. Michaelson, "Automatic analysis of functional program style", *Proceedings - 1996 Australian Software Engineering Conference*, pp. 38-46, 1996.

4. A. Mohan and N. Gold, "Programming style changes in evolving source code", *Proceedings. 12th IEEE International Workshop on Program Comprehension*, vol. 12, pp. 236-240, 2004.

5. J. Sitthiworachart and Joy Mike, "Web-Based Peer Assessment System with an Anonymous Communication Tool", *Proceedings of the IEEE International Conference on Advanced Learning Technologies*, pp. 918-919, 2004.

6. "40 min tests. 500+ roles. No trick questions", Nov 2022, [online] Available: <https://www.adaface.com/>.

7. "Xobin Online Pre-employment Assessment Software for remote hiring", Nov 2022, [online] Available: https://xobin.com/?gclid=Cj0KCCQiA1Ne bBhDDARIsAANiDD0G5SmF_pd31cSl Dsh8_vjSC1iOBjldhI5uhyRGmGXPf FAp2_AAUYaAoctEALw_wcB.

8. "Tests4Geeks - Online Programming & Coding Tests", Nov 2022, [online] Available: <https://tests4geeks.com/>.



IJARST

International Journal For Advanced Research In Science & Technology

A peer reviewed international journal

ISSN: 2457-0362

www.ijarst.in