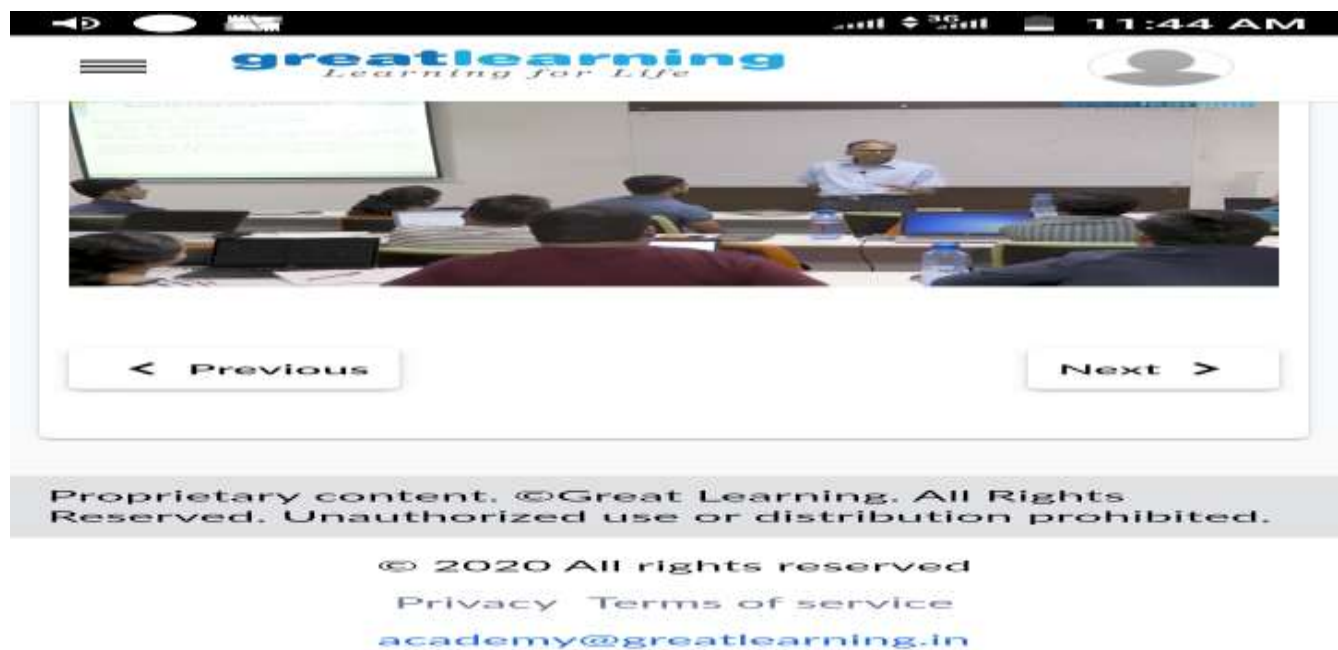


## DAILY ASSESSMENT FORMAT

Date:	16_06_2020	Name:	PRINCIA MELITA DSOUZA
Course:	greatlearning	USN:	4AL17EC075
Topic:	probability	Semester & Section:	6 <sup>TH</sup> B
Github Repository:	MELITA-1999		

### FORENOON SESSION DETAILS

Image of session



#### **Report – Report can be typed or hand written for up to two pages**

Case Study: Improving Students' Performance with Formative Assessment Anna Carolina Finamore<sup>1</sup>, Ana Pacheco<sup>1</sup> <sup>1</sup> CEMAT and Dept. of Mathematics, Instituto Superior Técnico, Portugal <sup>2</sup> CEAFEL and Dept. of Informatics, PUC-Rio, Rio de Janeiro, RJ, Brazil <sup>4</sup> Dept. of Applied Informatics - UNIRIO, Rio de Janeiro, Brazil

This paper presents a case study of a Mathematics' regular course offered every academic term to about 1500 STEM students at the Instituto Superior Técnico of Lisbon. The main concern of this course is the low approval rates and the high dropout rates. An Electronic Quizzes with Random Parameters, based on the formative assessment was introduced besides the traditional lectures. The main goal of this paper is to map and understand student weaknesses and then invite professors and staff to discuss students' learning. Preliminary results show that the proposed approach contributed to increase student performance.

**Keywords:** Formative Assessment, Online Quizzes, Case Study, STEM Education.

**1 Introduction** The Probability and Statistics (PS) course at the Instituto Superior Técnico of Lisbon (IST)<sup>1</sup>. Briefly, PS is a regular course offered by the Mathematics Department (MD) to about 1,500 students from the Departments of Engineering and Sciences. Based on internal reports and data provided by the IST's Statistics and Prospective Center, the proportion of students who approved the course in 2013 and 2014 was only 35% whereas student's drop out reached over 50% at some academic terms, a very high percentage.

Given this negative scenario, both the Pedagogical Council and the MD of IST proposed a new pedagogical strategy that the evaluation of PS students has been merely based on summative assessment [3], that is, composed by two tests after a set of instructional units. Based on this scenario and motivated by previous experiences in courses such as Differential Equations at IST, the Mathematics Department and the Pedagogical Council joined efforts to implement formative assessment as an attempt to improve students' performance. The formative assessment is based on Online Electronic Quizzes with Random Parameters (OEQRPs) that are graded and stored in the IST Learning Management System called Fénix by the students, we conducted an analysis [7] to assist PS staff to realign and develop strategies to improve learning that although we have used all data available to conduct this analysis, due to space restrictions only 6 out of 10 pages of the paper presents a case study of the PS course before and after applying formative assessment as an attempt to support students who need support at an early stage and enhance the teaching and learning process. The remainder of the paper reviews works concerning assessment methodologies. Section 3 presents a case study and the proposed assessment results and, finally, Section 5 concludes the paper.

## 2 Related Work

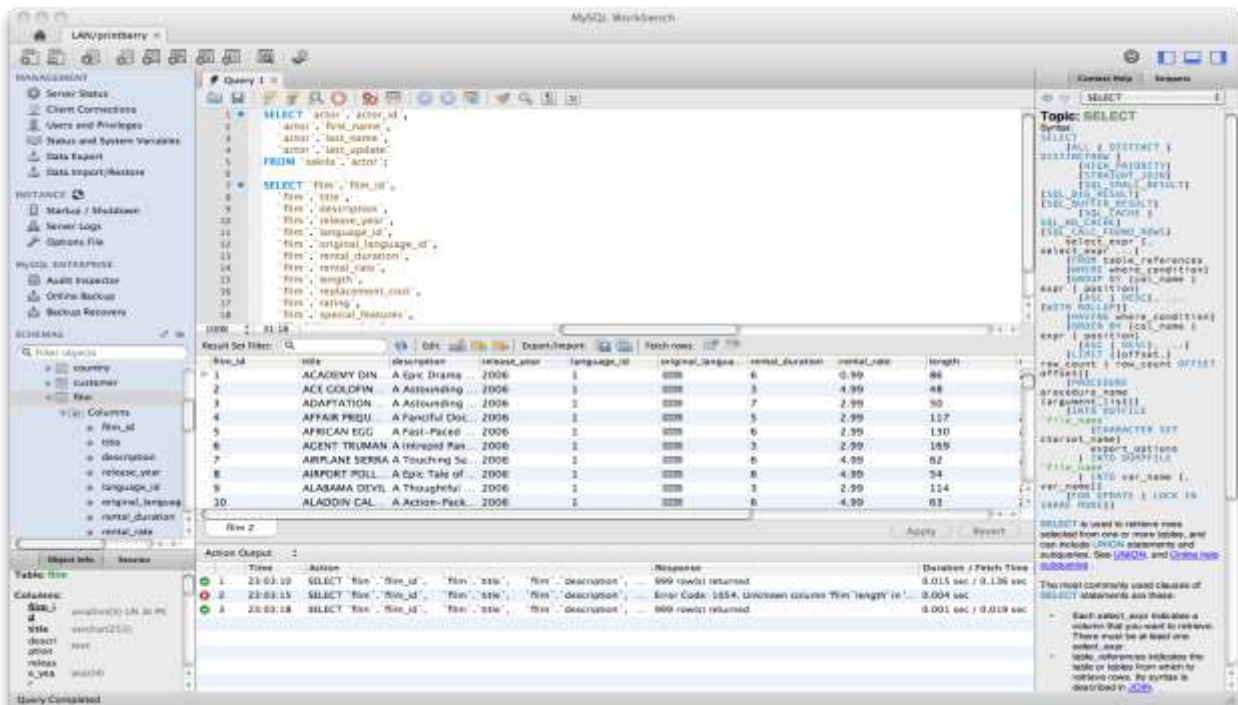
Higher Education Institutions (HEIs) have implemented various teaching and learning strategies as well as to be in constant alignment with students' changes and needs. Several methodologies have been used, for instance, diagnostic assessment [8, 11], formative assessment, summative assessment, stealth assessment [9]. These assessment methodologies can occur both in a synchronous or asynchronous way [12], since most of them are based on summative assessment [3] has a qualification purpose, verifying the student achievement after the learning process had occurred. Formative assessment purpose, providing information during the course about the topic's understanding by the students and about the teaching and learning process.

**Date:** 16\_06\_2020  
**Course:** udemy  
**Topic:** mysql

**Name:** PRINCIA  
**USN:** 4AL17EC075  
**Semester & Section:** 6<sup>th</sup> B

## AFTERNOON SESSION DETAILS

### Image of session



**Report – Report can be typed or hand written for up to two pages.**

MySQL is a free, open source RDBMS (relational database management system) that utilizes SQL (structured query language). SQL is a language used to add, access and manage database content. The language is known for its proven reliability, quick processing, flexibility and ease of use. MySQL is a specialized database software program that makes storing and retrieving data as efficient as possible. A database program is essentially computer software designed to manage loads of information. The program stores the data in such a way that retrieving information becomes quick and easy. For example, if a database stores a list of buyers and their addresses, typing in and accessing data about the one millionth buyer would take the same time as retrieving information about the first customer on the list. SQL is a computer language supported by several database software programs. It makes accessing database data for other programs easy. Programs that need database software for handling low-level task of managing information would simply use SQL to transmit instructions.