



MyOGA Calculator: One-Stop Assessment Template

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Abstract: *MyOGA Calculator was developed as a one-stop tracking and monitoring platform for students to monitor their on-going assessment marks for all courses registered. This template will help students, particularly UiTM students, to keep track of their progress from the continuous assessment or on-going assessment (OGA) marks received from the beginning until the end of each semester for all courses enrolled in order to track and monitor their performance. To use the template, the students need to choose the assessment methods for every course and enter their assessment marks into the column with pre-generated formula. By using this template, they can easily monitor and review their progress throughout the semester. With that, students can identify which courses need to be given more attention to get a good GPA in that semester and maintaining a good CGPA throughout the duration of their diploma or degree study by using this simple, user-friendly and easy to use template.*

Keywords: assessment; student performance; GPA; CGPA.



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1. INTRODUCTION

Assessment is defined as any form of measurement and evaluation of student knowledge and skills (Dietel et al., 1991). In higher education institutions, student performance and progress are monitored through various assessment mechanisms such as tests, assignment, quizzes, presentation, case study, project, industrial training, seminar and more (Amelia et al., 2019). The assessments are conducted to provide a snapshot of what a student has learned whether it be the end of a course, a semester, or a degree program (Dietel et al., 1991). The purpose of the assessment is to evaluate students' ability and skills and from the score obtained the students are able to be differentiated between excellent students and students who only achieve the basic level of a learning outcome (Maya et al., 2021). To improve student performance, several applications and technologies in the higher education institutions are needed (Tawafak et al., 2019).

Most higher education systems globally measure academic performance of a student by evaluating the Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA). GPA refers to scores obtained in a semester; while CGPA measures the overall academic performance of a student through the scores they have obtained in all the semesters combined (Yogendra & Andrew, 2017). To get a good GPA in a semester, a student needs to score good marks in all courses they have registered for that semester. And to get a good CGPA, a student needs to keep his GPA consistent in all semesters of his study duration.

In most courses in UiTM, there are two divisions of assessment which are on-going continuous assessment which is conducted throughout the 14 weeks of ongoing lectures and a final assessment which is carried out at the end of the semester during final exam weeks. There are also some courses where all assessments are conducted during the 14 weeks of ongoing lectures without the component of final exam. Both mechanisms require lecturers to give feedback and evaluation marks to students in certain percentage as stated in the course syllabus. Therefore the on-going assessment marks for some tasks are visible to students before the final examination. To get good GPA for a semester, a student needs to score good marks in all courses and good marks can be achieved if all assessments are done successfully with good scores. Hence, if students can monitor their on-going assessment (OGA) marks in the previous assessments; this may enhance their motivation to do better in the upcoming tasks. As a result, an overall good score will be obtained. Therefore, a performance tracking and monitoring platform for student is a good way to improve their academic performance (Mathai & Sreekumar, 2021; Mutakwa & Mhakure, 2019). This kind of platform if applicable to students, teachers, administrators, and policymakers; will also serves an important role to provide information that is used to assist in decision makings that will further improve the academic performance of students.

2. PROBLEM STATEMENT

In UiTM the assessment of student performance in most courses is conducted continuously during the 14 weeks of study in a semester using different methods of assessment. Therefore, students must be aware of their courses' assessment methods and the grading system. Hence, it is important for students to keep track of their performance. Even though, the score and feedback of previous assessments are received as early as week 7 from their lecturer; most students are not aware of their current performance until their accumulated OGA marks are announced at the end of the semester before their final examination. At that point, it is too late to do anything if their OGA score is low. Therefore, this template is extremely helpful to students as they can watch their performance in all courses in a timely manner in a semester. Once they receive their assessment marks, they can key-in the marks into the template and view their calculated current score. Hence, this template is beneficial to students as it helps them calculate their score that allow them to track their progress and thoughtfully plan their study to improve their score and any weak subject can be identified early to achieve their performance target.

3. PRODUCT OBJECTIVES

This innovation is specifically designed to help students to easily monitor their progress and performance over time in a semester. By using this product, the OGA scores for all courses registered can be viewed in one template and hence students can carefully plan their actions towards achieving good overall GPA in a particular semester based on their accumulated OGA marks.

4. PRODUCT DESCRIPTION

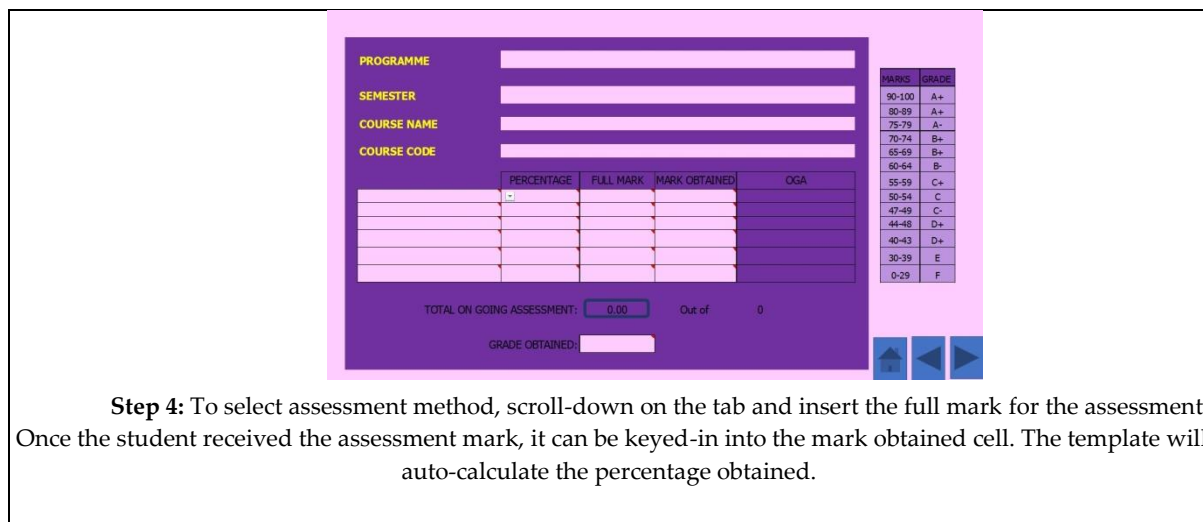
MyOGA Calculator is a template developed to provide a one-stop platform for students to track and monitor their academic progress and performance over time in a semester. Students can use this template to record all marks received for their on-going assessment for all courses so that they can always keep track of their current progress and thus plan their action towards achieving their target grade for the courses in order to get good GPA for that semester. The template was created by using Microsoft Excel and Microsoft PowerPoint. Therefore, it offers the advantage of user-friendliness and simplicity to use.



Figure 1: The front interface to access the template.

The image below shows the steps involved in using the template:

 <p>Step 1: To begin fill-up the student details.</p>
 <p>Step 2: Select semester.</p>
 <p>Step 3: Enter the course name for all courses and click on the course tab to insert the details.</p>



Step 4: To select assessment method, scroll-down on the tab and insert the full mark for the assessment. Once the student received the assessment mark, it can be keyed-in into the mark obtained cell. The template will auto-calculate the percentage obtained.

Figure 2: Template design and steps involved.

Once the details of an assessment are keyed in completely into the template, students can be keyed in the details for different CODES. The following is an overview of the complete assessment details:

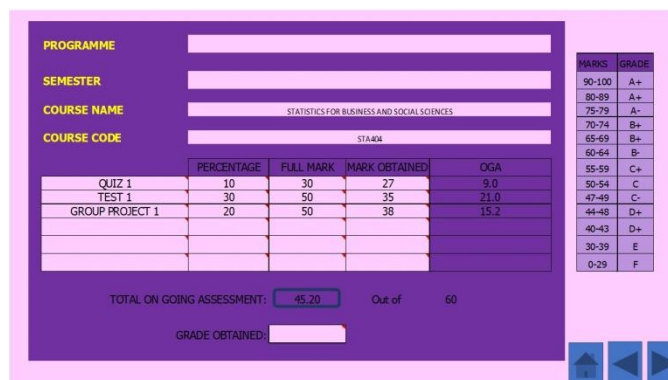


Figure 3: A course with complete details.

In addition, the grade indicator is placed on the template; therefore students can easily monitor their achievement based on their accumulated marks. Therefore, this template enables students to keep track of their progress in a timely manner.

5. COMMERCIALIZATION POTENTIAL

Based on the product’s features, MyOGA Calculator has the potential to be upgraded as mobile application and can be commercialized nationwide through Android and iOS store once developed. Since the template is dynamic, students from all different programs and courses in UiTM as well as in other higher institutions can use the template as their monitoring performance platform. To protect the copyright of this template from being replicated, MyOGA Calculator has been registered under the intellectual property of which the registration number is LY2022S04815.

6. CONCLUSION

To sum up, the MyOGA Calculator provides so many advantages for all students in higher learning institutions. By using this template, students are more aware of their current score as an indicator of their performances in all courses enrolled. Hence, this template is beneficial to students as it helps them to track their progress and monitor their performance in order to achieve a performance target.

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References

- Amelia, N., Abdullah, A. G., & Mulyadi, Y. (2019). Meta-analysis of student performance assessment using fuzzy logic. *Indonesian Journal of Science and Technology*, 4(1) <https://doi.org/10.17509/ijost.v4i1.15804>
- Dietel, R. J., Herman, J. L., & Knuth, R. a. (1991). What does research say about assessment? North Central Regional Educational Laboratory.
- Mathai, P., & Sreekumar, K. (2021). Students' performance tracking using BPM classification modelling. *Proceedings of the 2021 1st International Conference on Advances in Electrical, Computing, Communications and Sustainable Technologies, ICAECT 2021*. <https://doi.org/10.1109/ICAECT49130.2021.9392526>
- Maya, J., Luesia, J. F., & Pérez-Padilla, J. (2021). The relationship between learning styles and academic performance: consistency among multiple assessment methods in psychology and education students. *Sustainability (Switzerland)*, 13(6). <https://doi.org/10.3390/su13063341>
- Mutakwa, D. T., & Mhakure, D. (2019). Tracking students' performance in higher education: The transition from national benchmark tests to quantitative literacy intervention course. *South African Journal of Higher Education*, 33(4). <https://doi.org/10.20853/33-4-2892>
- Tawafak, R. M., Romli, A. M., & Alsinani, M. J. (2019). Student assessment feedback effectiveness model for enhancing teaching method and developing academic performance. *International Journal of Information and Communication Technology Education*, 15(3). <https://doi.org/10.4018/IJICTE.2019070106>
- Yogendra, N., & Andrew, A. (2017). A Study on The Factors Influencing on Grade Point Average (GPA) With Special Reference to Third Year Commerce and Management Students of Eastern University, Sri Lanka. *Journal for Studies in Management and Planning*, 03(08).