CGPA TO PERCENTAGE CONVERTER

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Abstract— The aim of this study is to provide a platform where SPPU university students can easily convert their cumulative grade point average (CGPA) to percentage. Usually, students are more comfortable in the percentage system as CGPA is a new concept to most of them. Percentage is the basic requirement criteria to be addressed/written in many official forms like job applications, scholarships forms, etc. As university students get their result in CGPA format, they need to convert them first in percentage, but the procedure of converting CGPA to percentage is not known to many students. There are many websites and formulae available on the internet, but the accuracy of each is different. In addition, the manual way of calculation can increase error rate, and may be hectic. To resolve this issue, a system is proposed that converts CGPA to percentage in an accurate format. A student needs to enter his/her CGPA, and in just one click, user gets a converted percentage. The system is crafted utilizing HTML, CSS, and JavaScript. The system can be executed in any operating system and is user-friendly.

Keywords: CGPA, Percentage, Grade, Class, User interface.

1. INTRODUCTION

In the realm of academic assessment, students' performance is gauged through their final grades, pivotal in determining their comprehension and proficiency in requisite courses [1]. A cornerstone of this evaluation is the Cumulative Grade Point Average (CGPA), a numerical representation reflecting a student's overall academic achievement, typically ranging between 1.0 and 10.0 [2]. This metric serves as a comprehensive indicator of success throughout their academic journey, reflecting performance across various courses and semesters.

Educational systems utilize diverse methodologies to convey grades. One common approach computes the average grade percentage across all courses, translated into degree classifications like excellent, very good, good, pass, or fail [4]. Alternatively, CGPA converts final percentages into letter grades, though nuances in performance may be overlooked [4].

In the context of Savitribai Phule Pune University (SPPU), CGPA to percentage conversion follows a formula-based system, aligning with academic standards. Specific guidelines ensure fairness, with a prescribed mathematical formula considering course credits, grading scales, and institutional norms.

SPPU aims to streamline evaluation, providing a transparent method for translating CGPA into percentage rankings, vital for assessing academic progress and determining eligibility for further endeavors. Understanding and implementing these protocols are crucial for students, faculty, and administrative staff, facilitating standardized assessment and promoting equal opportunities for all..

2. LITERATURE SURVEY

The conversion of Cumulative Grade Point Average (CGPA) to percentage is a critical aspect of academic evaluation, especially within the framework of institutions like Savitribai Phule Pune University (SPPU).
SPPU provides specific guidelines for CGPA to percentage conversion, outlining the factors to be the formula to be used [4].
These guidelines typically take into account the credit system, grading scales, and institutional norms, ensuring consistency and fairness in the evaluation process [5].
Faculty members and administrative staff play a crucial role in implementing these guidelines and ensuring adherence to established protocols [6].
The result of SPPU declared for each Semester and the final grade sheet is as follows:

TABLE 1: Grade and Grade- Points

Marks	Grade	Grade-Points
80-100	O: Outstanding	10
70-79	A+: Excellent	9
60-69	A: Very Good	8
55-59	B+: Good	7
50-54	B: Above average	6
45-49	C: Average	5
40-44	P: Pass	4
0-39	F: Fail	0
-	Ab: Absent	0

Equation1: Formula for conversion of CGPA to percentage

Cumulative Grade Point Average =

$$\frac{\text{Total of Grade Points Earned for a course X Credit hrs for each course}}{\text{Total Credits Hours}}$$

$$CGPA = \frac{\sum_{i=1}^{n} P_i \times C_i}{\sum_{i=1}^{n} C_i}$$

where,
n = Total number of courses
P_i= Grade points earned in i^{th} course
C_i= Number of credits in i^{th} course

The formula for conversion of CGPA to percentage is given in following table:

TABLE 2: Formules for specific CGPA range

Grade	CGPA Range	Formula
O	9.00 - 10.0	20 * CGPA -100
A+	8.50 - 8.99	20 * CGPA -100
A	7.50 - 8.59	10 * CGPA -15
B+	6.50 – 7.49	5* CGPA+22.5
B	5.50 – 6.49	5* CGPA+22.5
C	4.25 – 5.49	4* CGPA+28
P	4.00 – 4.24	20 * CGPA -40

The literature reviewed underscores the complexity of CGPA to percentage conversion and highlights the importance of standardized methodologies and institutional guidelines. By understanding the various approaches and challenges involved, educational institutions like SPPU can ensure fairness, consistency, and transparency in evaluating students' academic achievements. Continued research and collaboration are essential for refining conversion methods and adapting to the evolving landscape of higher education.

3. METHODOLOGY

With focus on enhancing accessibility and facilitating academic assessment, the methodology of SPPU CGPA to percentage converter includes the following key stages:

1. Access the Converter Tool:

   - Navigate to the designated link provided on the college portal to access the CGPA to Percentage Converter tool.

2. Input Personal Information:

   - Enter your name and Savitribai Phule Pune University (SPPU) Permanent Registration Number (PRN) into the designated fields on the converter interface.

3. Enter CGPA:

   - Input your Cumulative Grade Point Average (CGPA) obtained from SPPU into the corresponding field on the converter interface.

4. Initiate Conversion Process:

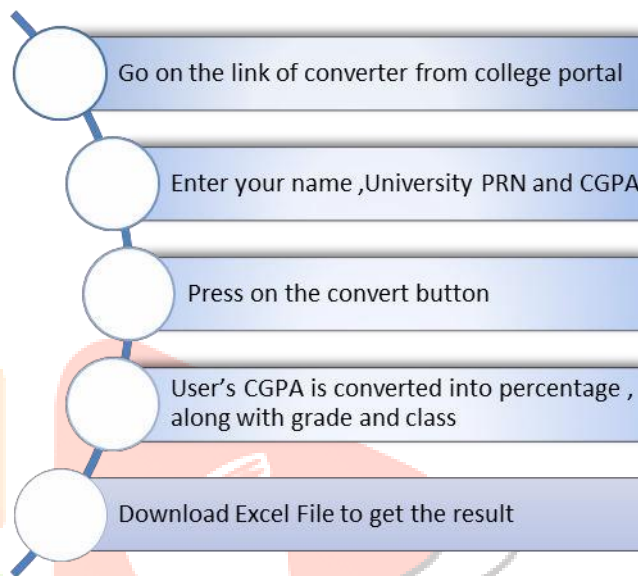   - Click on the "Convert" button to trigger the conversion process.

5. Conversion Results:

   - Upon pressing the "Convert" button, the user's CGPA will be processed and converted into percentage format, accompanied by the corresponding grade and class.

6. Download Result:

   - Once the conversion is completed, users have the option to download the conversion result as an Excel file for further reference and record-keeping purposes.

By following these steps, users can seamlessly convert their CGPA obtained from Savitribai Phule Pune University (SPPU) into a percentage format, facilitating easy interpretation and comparison of academic performance.

FIGURE 1: Proposed Methodology

4. *RESULT*

FIGURE 2: Image of output

5. ADVANTAGES

1. Comparing Performance Across Different Grading Systems: Many educational institutions use CGPA (Cumulative Grade Point Average) as a metric for academic performance. However, some schools, exams, or courses may still utilize percentages. A CGPA-to-Percentage calculator can bridge the gap by allowing you to convert your percentage score obtained in one system to an equivalent percentage, enabling comparison across different grading schemes.

2. Understanding Percentage Requirements: If you are applying to a program or scholarship that requires a specific percentage, you might receive your scores in percentages. Using a converter can help you understand your performance in terms of the CGPA system used by the target institution.

3. Estimating Percentage for Future Performance: By calculating the percentage equivalent of your current CGPA scores, you can gain an approximate idea of your potential CGPA if you continue performing at the same level (assuming consistency in the grading system). This can help plan and set goals.

4. Simplifying Communication: Sometimes, communicating academic performance to others (e.g., parents, peers) may be easier using percentages, as they might be more familiar with this system. A converter can help you translate your CGPA into a percentage for easier understanding by others, facilitating communication.

6. LIMITATIONS

1. Specific Conversion Formula: SPPU may have its own prescribed formula for converting CGPA to percentage. This formula is typically provided by the university and may take into account factors such as credit hours, grading scales, and any specific policies of the university.

2. Updates and Changes: SPPU, like any educational institution, may periodically update its policies or grading systems. Changes in these policies could affect the accuracy or applicability of previously used conversion formulas.

6. FUTURE SCOPE

Future development of the SPPU CGPA to Percentage Converter could entail several enhancements aimed at further improving accessibility and user experience for SPPU students and stakeholders:

1. Integration with SPPU's Student Portal:
   - Integrating the converter with SPPU's official student portal would provide students with seamless access to the conversion tool directly from their academic dashboard. This integration would streamline the process of accessing and utilizing the converter, eliminating the need for students to navigate to external platforms.

2. Integration with College Official Website:
   - Extending the integration to include the college's official website would enhance accessibility for students, faculty, and other stakeholders. By embedding the converter within the website's resources section or student services portal, users can conveniently access the tool while browsing relevant information or performing academic tasks.

3. Multilingual Support:
   - Implementing multilingual support within the converter would cater to the diverse linguistic preferences of SPPU's student body. By offering language options beyond English, such as Marathi and Hindi, the converter becomes more inclusive and accessible to students from different linguistic backgrounds, thereby promoting equity and diversity.

4. Continuous Improvement and Optimization:
   - Committing to ongoing development and refinement of the converter ensures its continued relevance and effectiveness. The

5. Mobile Application Development:
   - Developing a dedicated mobile application for the SPPU CGPA to Percentage Converter would further enhance accessibility and convenience for students. A mobile app would enable users to perform conversions directly from their smartphones or tablets, offering flexibility and accessibility on the go.

6. Integration with Academic Services:
   - Exploring opportunities to integrate the converter with other academic services offered by SPPU, such as course registration portals or academic advising platforms, could provide added value to students. For example, integrating the converter with course registration systems could help students make informed decisions about their course selections based on their projected percentage outcomes.

By incorporating these enhancements into the future development roadmap, the SPPU CGPA to Percentage Converter can evolve into a comprehensive and indispensable tool for students and stakeholders, fostering efficiency, accessibility, and user satisfaction within the academic community.

7. CONCLUSION

In summary, the CGPA to Percentage Converter project introduces a tailored solution explicitly crafted for the student community at Savitribai Phule Pune University (SPPU). By harnessing the university's endorsed formula from the curriculum, this converter provides a streamlined approach to translating CGPA scores into their equivalent percentages. The implementation of this project as a user-friendly web-based service holds the potential to yield significant benefits for students, educators, and the institution as a whole by fostering greater clarity and accessibility in assessing academic performance.

This initiative addresses a fundamental need among SPPU students by simplifying the often complex process of interpreting CGPA scores. By offering a straightforward means of understanding academic achievements in terms of percentages, the converter empowers students to gain deeper insights into their performance and make more informed decisions regarding their educational paths. This heightened clarity can act as a catalyst for student motivation and engagement, ultimately fostering improved learning outcomes and academic success. Moreover, educators and academic administrators stand to benefit from the implementation of this converter as it facilitates streamlined administrative processes related to grading and assessment. By standardizing the conversion process, the converter promotes consistency and transparency in evaluating students' academic achievements, thereby enhancing the overall efficiency and effectiveness of educational operations within the institution. Furthermore, the user-friendly nature of the web-based service ensures accessibility for all stakeholders involved, including students, faculty, and administrative staff. With just a few clicks, users can access and utilize the converter, eliminating the barriers associated with complex manual calculations or outdated conversion methods. This accessibility fosters a culture of data-driven decision-making and accountability, aligning with the institution's commitment to excellence and continuous improvement in academic practices.

ACKNOWLEDGMENTS

REFERENCES:

For papers published in translation journals, please give the English citation first, followed by the original foreign-language citation [6].

1. G. N. EZEH 1 Department of Electrical/Electronic Engineering, Federal University of Technology, Owerri, NIGERIA. E. C. EZEH Department of Electrical/Electronic Engineering, Federal University of Technology, Owerri, NIGERIA. A. GEORGE Department of Electrical/Electronic Engineering, Federal University of Technology, Owerri, NIGERIA. C. F. INYA Department of Electrical/Electronic Engineering, Federal University of Technology, Owerri, NIGERIA." MICRO-CONTROLLER BASED CUMULATIVE GRADE POINT AVERAGE (MICGPA) CALCULATOR" ISSN-L: 2223-9553, ISSN: 2223-9944 Vol. 3, No. 2, September 2012

2. Vivek Kumar Jain1 and Sanjeev Bakshi" Interrogating CGPA: In Search of the Missing Links—Suggested Alternatives"

3. Altaf Hussain1, Prof. Dr. Salim Ur Rehman2, Prof. Dr. Iftikhar Hussain1, "Effect of Grading Policy on Students' CGPA−A Case Study of an Engineering College", International Journal of an Engineering Research and Development e-ISSN: 2278-067X, p-ISSN: 2278-800X, www.ijerd.com Volume 10, Issue 7 (July 2014), PP.01-09.

4. Mohit Sunil Pansare1; Gladys Gince Skariah1; Rhea Nilesh Bhalekar1; Garima Tripathi (Professor)1 1Department of Artificial Intelligence and Data Science, Mumbai University, Maharashtra, India 1Fr. Conceicao Rodrigues College of Engineering, Bandra, India, "Development of a Tool for Quick Result Analysis", International Journal of Innovative Science and Research Technology ISSN No:-2456-2165

5. Kavya N. Naik; Arnica R. Patil; Kinnari N. Patil; Vaidehi R. Sankhe; Shraddha S. More; Vivian Brian Lobo, "A Python-based Grade Converter Application", 2023 Second International Conference on Electronics and Renewable Systems (ICEARS).

6. Yeap Chun Sheng; Mumtaz Begum Mustafa; Shahin Alam; Siti Hafizah Hamid; Asmiza Abdul Sani; Abdullah Gani, "Personal CGPA planning system for undergraduates: Towards achieving the first class CGPA", 2016 Fifth ICT International Student Project Conference (ICT-ISPC)

7. LINK OF SPPU CIRCULAR: https://www.google.com/url?q=https://campus.unipune.ac.in/CBCS/RulesAndRegulationsForCreditAndSemesterSystem_Updated05Mar2021.pdf&sa=U&ved=2ahUKEwiuhqLuqMmEAxUugFYBHT2JDJoQFnoECFgQAQ&usg=AOvVaw1CockgGQQPUTWUL8QFdHy6