In recent years, the field of education has witnessed a significant shift towards the integration of technology, particularly in the assessment design {Almond, 2002 #1; Gorin, 2006 #2; Van den Berg, 2006 #3; Villarroel, 2018 #4}. One area where this integration has gained significant attention is the use of generative AI in assessment tasks {Fergus, 2023 #5; Geerling, 2023 #6}. Generative AI refers to computer algorithms that can generate new content or responses based on a set of input data {Yeadon, 2023 #7; Yeadon, 2023 #7}. The integration of generative AI in assessment tasks provides various benefits such as efficient grading, increased objectivity, and reduced bias in the assessment {Benuyenah, 2023 #8}. However, the use of generative AI in assessment tasks poses several challenges, especially in the areas of academic integrity {Kooli, 2023 #9}.

Academic integrity is a critical aspect of education that ensures students maintain high ethical standards in their academic work {Emenike, 2023 #10; Fergus, 2023 #5}. Plagiarism, the act of presenting someone else's work as one's own, is a significant concern in academic integrity, as it undermines the credibility and reliability of assessment results {Bretag, 2019 #11}. The use of generative AI in assessment design can facilitate plagiarism, as students can easily use AI-generated content to cheat on assignments {Crawford, 2023 #12}. This issue poses a significant challenge to educators, who must ensure that assessment tasks are designed to promote academic integrity while also taking advantage of the benefits of generative AI {Crawford, 2023 #12}.

This paper addresses the challenges associated with the integration of generative AI in assessment design, specifically in the context of take-home assignments in software-related courses {Gilson, 2023 #13}. The researchers propose a framework that provides guidelines for designing assessment tasks that incorporate generative AI, while also promoting academic integrity {Perkins, 2023 #14}. The proposed framework offers a practical and flexible approach for educators seeking to integrate generative AI into their assessment design process {Fergus, 2023 #5}.

The paper is organized as follows: Section 2 provides a brief overview of the related work in the area of generative AI and assessment design. Section 3 describes our research approach for designing take-home assignments that incorporate generative AI. Section 4 presents findings that demonstrate the application of the proposed framework in the context of software-related courses. Finally, Section 5 concludes the paper and provides directions for future research in the area of generative AI and assessment design.

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| **Course name: Python for Data Science.** | **Programs.** | **Year.** | **Topic.** |
| Advance Program Technique. | BSE (Bachelor of Science in Engineering) is a four-year undergraduate program that focuses on the application of engineering principles to solve real-world problems. The program is designed to provide students with a solid foundation in mathematics, physics, and computer science, as well as specialized courses in engineering. The curriculum is designed to meet the needs of the rapidly changing technology industry, and graduates are well-prepared to enter the workforce or pursue advanced degrees in engineering. | 1. The teacher asked the students to write a short story about a character who learns a valuable lesson from a mistake they made.   2. The students were given a list of words and phrases to use in their stories, and they had to incorporate at least three of them into their narratives.   3. The teacher asked the students to write a short story about a character who learns a valuable lesson from a mistake they made.   4. The students were given a list of words and phrases to use in their stories, and they had to incorporate at least three of them into their narratives.   5. The teacher asked the students to write a short story about a character who learns a valuable lesson from a mistake they made, and they had to incorporate at least three of the given words and phrases into their narratives.   6. The students were given a list of words and phrases to use in their stories, and they had to incorporate at least three of them into their narratives.   7. The teacher asked the students to write a short story about a character who learns a valuable lesson from a mistake they made, and they had to incorporate at least three of the given words and phrases into their narratives.   8. The students were given a list of words and phrases to use in their stories, and they had to incorporate at least three of them into their narratives.   9. The teacher asked the students to write a short story about a character who learns a valuable lesson from a mistake they made, and they had to incorporate at least three of the given words and phrases into their narratives.   10. The students were given a list of words and phrases to use in their stories, and they had to incorporate at least three of them into their narratives.   11. The teacher asked the students to write a short story about a character who learns a valuable lesson from a mistake they made, and they had to incorporate at least three of the given words and phrases into their narratives.   12. The students were given a list of words and phrases to use in their stories, and they had to incorporate at least three of them into their narratives.   13. The teacher asked the students to write a | C++ is a general-purpose programming language that was created by Bjarne Stroustrup at Bell Labs in the late 1970s and early 1980s. It is a compiled language that is known for its efficiency, portability, and flexibility. C++ is used in a wide range of applications, including operating systems, web browsers, and games. It is also widely used in the development of applications for mobile devices, such as smartphones and tablets. C++ is an extension of the C programming language and provides object-oriented programming features, such as encapsulation, inheritance, and polymorphism. It is a popular language among programmers and is used in many different industries, including finance, healthcare, and education. |
| Enterprise Application Development. | BSE (Bachelor of Science in Engineering) is a four-year undergraduate program that focuses on the application of engineering principles to solve real-world problems. The program is designed to provide students with a solid foundation in mathematics, physics, and computer science, as well as specialized courses in engineering. The curriculum is designed to meet the needs of the rapidly changing technology industry, and graduates are well-prepared to enter the workforce or pursue advanced degrees in engineering. | 1. The teacher asked the students to write a short story about a character who learns a valuable lesson.   2. The students wrote a variety of stories, but one stood out for its creativity and originality.   3. The teacher praised the student for their hard work and dedication.   4. The student beamed with pride as they received their award.   5. The teacher encouraged the students to continue writing and experimenting with different styles.   6. The students left the classroom feeling inspired and motivated to continue their creative writing journey. | HTML и Javascript.   Correct only grammar in the following text if needed do not define or add information keep it in one paragraph: The company will launch a new product line next month. The new product line will be available in all major retailers across the country. The company will also launch a new marketing campaign to promote the new product line. The new marketing campaign will be rolled out in the coming weeks. The company is excited about the new product line and the new marketing campaign. The new product line will be available in all major retailers across the country. The company will also launch a new marketing campaign to promote the new product line. The new marketing campaign will be rolled out in the coming weeks. The company is excited about the new product line and the new marketing campaign. |
| Object-Oriented Programming. | BIT (Bachelor of Information Technology) is a four-year undergraduate degree program that focuses on the design, development, and implementation of computer-based systems. The program covers a wide range of topics including programming languages, database management, computer networks, software engineering, and artificial intelligence. The BIT program is designed to provide students with a solid foundation in computer science and prepare them for a career in the rapidly growing field of information technology. | 2. The cat sat on the mat and purred contentedly.   3. The dog ran quickly across the field and chased the rabbit.   4. The baby laughed at the silly clown and clapped her hands.   5. The teacher graded the papers and gave them back to the students.   6. The man walked into the room and greeted everyone with a smile.   7. The woman wore a beautiful dress to the party and danced with joy.   8. The children played outside in the sunshine and had a great time.   9. The flowers bloomed in the garden and filled the air with their sweet scent.   10. The car drove down the street and stopped at the red light.   Please correct any grammar mistakes you see in the following sentences. | \* Java is a popular programming language used for developing web, mobile, and desktop applications. \* It is known for its platform independence, allowing Java code to run on any device supporting the Java Virtual Machine (JVM). \* Java is also used for developing enterprise software, Android apps, and games. \* The language is maintained by Oracle Corporation, which releases new versions and updates regularly. \* Java is a statically-typed language, meaning that variables must be declared with their data type before use. \* Java is known for its simplicity and readability, making it a popular choice among developers. \* Java is free and open-source, allowing developers to use and distribute Java code without any licensing fees. \* Java is a versatile language that can be used for a wide range of applications, from simple scripts to complex systems. \* Java is a powerful language that can be used for developing desktop applications, mobile apps, and web applications. \* Java is a popular language that is widely used in the industry and academia for teaching and research purposes. \* Java is a language that is constantly evolving, with new features and improvements being added in each new version. \* Java is a language that is widely used in the industry and academia for developing enterprise software, Android apps, and games. \* Java is a language that is known for its platform independence, allowing Java code to run on any device supporting the Java Virtual Machine (JVM). \* Java is a language that is used for developing web, mobile, and desktop applications. \* Java is a language that is free and open-source, allowing developers to use and distribute Java code without any licensing fees. \* Java is a language that is known for its simplicity and readability, making it a popular choice among developers. \* Java is a language that is constantly evolving, with new features and improvements being added in each new version. \* Java is a language that is widely used in the industry and academia for teaching and research purposes. \* Java is a language that is used for developing desktop applications, mobile apps, and web applications. \* Java is a language that is known for its platform independence, allowing Java code to run on any device supporting the Java Virtual Machine (JVM). \* Java is a language that is used for developing web, mobile, and desktop applications. \* Java is a language that is free and open-source, allowing developers to use and distribute Java code without any licensing fees. \* Java is |