


# Using databases when creating multimedia products

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Databases are organized sets of data that are systematized and structured for efficient storage, management, and access to information. In the context of modern multimedia projects, databases play a key role in providing access to various types of multimedia data, such as images, videos, audio, texts, and other multimedia elements.

A multimedia project is a project that uses different types of multimedia data to create visual or audiovisual content. This can be anything from websites and mobile applications to computer games and educational programs.

Transferring student ID to the database

Moodle

Node.js

Oracle SQL Developer

COLUMN_NAME	DATA_TYPE	CHAR_LENGTH	NUM_LENGTH	DATA_DEFAULT	COMMENTS
ANSWER_ID	NUMBER(4,0)	4			
QUESTION_ID	NUMBER(4,0)	4			
ANSWER_TEXT	TEXT				
QUESTION_TEXT	TEXT				
ANSWER_DATE	DATE				
QUESTION_DATE	DATE				
ANSWER_USER	NUMBER(4,0)	4			
QUESTION_USER	NUMBER(4,0)	4			
ANSWER_STATUS	NUMBER(1,0)	1			
QUESTION_STATUS	NUMBER(1,0)	1			
ANSWER_RESULT	NUMBER(4,0)	4			
QUESTION_RESULT	NUMBER(4,0)	4			

Creating a task and posting it on a web page

Module for calculating and checking the correctness of the task execution

MongoDB

Methodical guidelines for executing the task

Приклад 1. Визначте формат відображення і після обчислення. Формат відображення  $84 \times 108^{\circ}12$ .

Розв'язання

Частку дробу розкладемо на два найбільших множники, більшу частку дробу ділимо на більший множник, а меншу – на менший:

$$\frac{84}{108} = \frac{4}{3} \times \frac{21}{27}$$

$$(84 : 4) \times (108 : 3) = 210 \times 36 \text{ мм}$$

$135 \times 210 \text{ мм}$  – формат відображення до обчислення.

Щоб визначити розмір відображення після обчислення, необхідно від висоти відображення відняти 10 мм, а від ширини – відняти 5 мм.

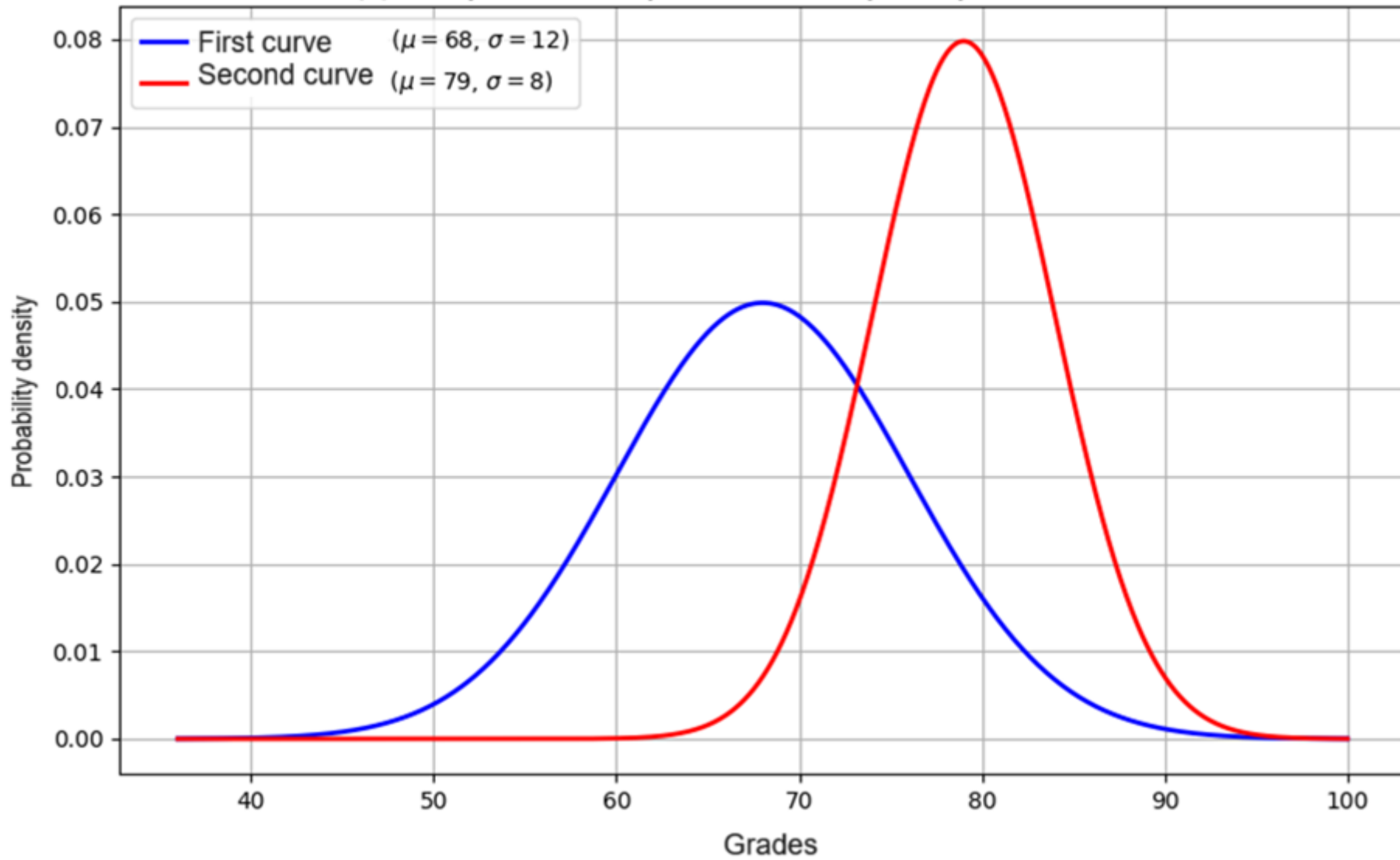
$$135 - 5 \times 210 = 10 = 130 \times 200 \text{ мм}$$

$$130 \times 200 \text{ мм}$$
 – формат відображення після обчислення.

Morphological matrix of the formation of the level of knowledge assimilation


		1	2	3	4	...	13
		Quality parameters for printed products	Color measurement in printing	Densiometric and <u>colourometric</u> control methods	<u>Moulding</u> processes control	...	Organization of statistical quality control in printing houses
A	ability to solve technical tasks	PA1	PA2	PA3	PA4	...	PA13
B	ability to work with technical literature and handbooks	PB1	PB2	PB3	PB4	...	PB13
C	ability to see a task	PC1	PC2	PC3	PC4	...	PC13
D	ability to explain a technical task	PD1	PD2	PD3	PD4	...	PD13
E	ability to plan work	PE1	PE2	PE3	PE4	...	PE13

Source: Authors' development




Moodle tools : the first curve – the main group of students, the second curve – the control group

The use of multimedia databases during the preparation of educational products provides a number of significant advantages. First, this approach is based on a systemic approach both in general and when designing a programmatic and regulatory environment for studying individual disciplines. This contributes to a deeper and more comprehensive understanding of the material.



In addition, multimedia databases make it possible to implement laboratory practices based on a competent approach, where students acquire the necessary competencies in practice and apply them in the creation of projects of various formats. This approach promotes the development of creativity and the ability to work in a team.



The individual trajectory of laboratory work gives students the opportunity to choose the subject of the content and the format of the tasks, which stimulates their activity and independence. Also, the creation of complex interdisciplinary projects allows integrating knowledge from different fields and forming a holistic vision of the problem.