Data Management and Visualization

Exam policy (A.Y. 2020-2021)

The exam lasts **90 minutes** and consists of theoretical questions and written exercises, as described in the following.

- **Theory [5 points]**
    o at least 3 multiple-choice questions on theoretical topics of the course, including all the topics presented by the teachers during the lectures and the related material (slides), such as the following:
        • conceptual, logical, and physical data warehouse design,
        • extended SQL language,
        • technological characteristics of NoSQL databases and their usage,
        • data management issues in distributed (non-relational) databases,
        • data visualization techniques

- **DW [12 points]**, exercises on data warehousing, including:
    o at least 2 multiple-choice questions and at least 1 open-text question on data warehouse design (respectively on conceptual schema and logical design)
    o at least 2 queries for data access in extended SQL (open text-box questions)

- **NoSQL [9 points]**
    o at least 1 exercise on NoSQL database design
    o at least 1 query for data access in MongoDB
    o both are open questions with answers to be provided in a text box

- **Data Visualization [5 points]**
    o 1 exercise on visualization analysis and design with many different open questions
    o answers to be provided in a text box

Students are not allowed to use textbooks, notes, or additional electronic devices (besides the PC with Respondus + Lockdown browser) during the exam.

Exercises are evaluated according to the correctness of the proposed solution and to the appropriateness of the adopted resolution methodologies.

Multiple choice questions might have a penalty for wrong answers (the amount of penalty is indicated in the text of the question) and no penalty if no answer is provided.

Rules

- Only students regularly **booked** through the Teaching Portal (Portale della Didattica) are admitted to the exam.
- Students must provide their own **identity document** and must use compatible **hardware** devices, **software** configurations, and proper **network** connection, according to the official university-wide rules for the "Exam" platform and the **Respondus** proctoring system.
- The exam maximum duration is **90 minutes**. Please note that you might be forced to wait a certain amount of time (e.g., 1 hour) before being allowed to exit the Exam.
- The student must take the exam in a room alone. Only the PC used to take the exam must be on the desk. **No other objects can be present on the desk**. Books, notes, empty sheets, and any other paper materials are NOT allowed. Electronic devices of any kind (PC, laptop, mobile phone, e-readers, calculators, etc.), apart from the PC used to take the exam, are NOT allowed.
- **Technical issues before the exam** must be solved by contacting the specific offices, as indicated in the official documentation on www.polito.it
- **Technical issues during the exam** will be treated according to the university-wide rules, as indicated in the official documentation on www.polito.it.
- The correct execution of the exam on the Respondus tool will be verified and irregular behaviors will be prosecuted following the university policy.