The exam consists of written exercises, as described in the following, with open or closed answers, to be executed online using a PC by exploiting the Polito “Exam” platform integrated with proctoring tools (Respondus). This procedure is among those officially approved. For detailed university-wide rules (e.g., technical requirements, catch-up examinations, management of technical problems, etc.) see the official documentation on www.polito.it.

This document describes the teaching aspects of the exam. All technical aspects, instead, are addressed by the Polito office as indicated on the official website. We invite students to refer to those offices for technical issues.

**Exercise types**

Exercises require the same preparation as the traditional on-paper exam.

- **[max 15 points]** Exercise on data warehousing, consisting of
  - **[max 7 points]** Conceptual and logical design of a data warehouse
    - The conceptual design exercises will require the student to choose the correct ones among the proposed solutions (multiple choice, penalty for wrong answers, no penalty for no answers).
    - The proposed solutions/answers are already drawn in the text, so that the student is not required to draw by using its PC.
    - The preparation for answering such a question is exactly the same as in the traditional exam, since the student must be able to design the schema: from scratch in the traditional exam on paper, and by identifying the correct one among those provided in the new online version of the exam.
    - The logical design answer will be written by the student in the answer text box, similarly to what the student would have written on paper in the traditional exam.
  - **[max 8 points]** Extended-SQL queries
    - The SQL code will be written by the student in the answer text boxes, similarly to what the student would have written on paper in the traditional exam.

- **[max 10 points]** Exercises on NoSQL design
  - The NoSQL code and possible comments will be written by the student in the answer text boxes, similarly to what the student would have written on paper in the traditional exam.

- **[max 6 points]** Exercises on data visualization
  - All exercises will require the student to provide open textual answers, similarly to what the student would have written on paper in the traditional exam. Also, the design exercise will require the student to describe in words a design proposal using the answer text box.
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 duration is **90 minutes**.
- 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 test, 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 rules.