g-exam

exam template for Typst

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1 Introduction

This template provides a way to generate exams. You can create questions and sub-questions, header with information about the academic center, score box, subject, exam, header with student information, clarifications, solutions, watermark with information about the exam model and teacher.

2 Usage

This is the minimum model for generating an exam, in which you define the g-exam template and the questions and subquestions with the g-question and g-subquestion commands.

```
#import "@preview/g-exam:0.3.2": *
#show: g-exam.with()

#g-question(points: 2)[List prime numbers]
#v(1fr)

#g-question(points: 1)[Complete the following sentences]
  #g-subquestion[Don Quixote was written by ...]
  #v(1fr)

  #g-subquestion[The name of the continent we live on is ...]
  #v(1fr)
```

3 Configuration

3.1 Header

The template will include a header in the exam, with the information entered in the template. We can indicate a logo of the educational center, a description of the exam, subject, content, academic level, ...

```
#show: g-exam.with(
  author: (
    name: "Heinrich Christian Schumacher",
    email: "matheschool@outlook.es",
    watermark: "Teacher: Heinrich",  ),
  school: (
    name: "Sunrise Secondary School",
    logo: read("./logo.png", encoding: none),
  ),
  exam-info: (
    academic-period: "Academic year 2023/2024",
    academic-level: "1st Secondary Education",
    academic-subject: "Mathematics",
    number: "2nd Assessment 1st Exam",
    content: "Radicals and fractions",
    model: "Model A"
  ),
)
```

3.2 Student Information

In order for a header in which the student must enter his/her personal data, it must be specified on the template by means of the 'show-student-data' property indicating how you want this box to appear. Values can be:

- **first-page**: It will only appear on the first page.
- **odd-pages**: It will appear on odd-numbered pages.
- **none**: The user information box will not appear..

The following example will display student information on the first page.

```
#show: g-exam.with(
  show-student-data: "first-page",
)
```

3.3 Scoreboard

We will be able to show a scoreboard, with the points for each question. In order for this table to appear, we will have to set the `show-grade-table` a **true**, a **false** so that it doesn't show up.

```
#show: g-exam.with(
  show-grade-table: true,
)
```

3.4 Questions

To enter the questions, use the `q-question`, followed by the text of the question. You can include the score of the question by entering the parameter `point`.

```
#g-question(points: 2)[Question text.]
#v(1fr)
```

To create sub-questions, it will be done in the same way with the `q-subquestion`, command, which will be nested to the question asked in the previous line. In the same way, the score of the question can be indicated, in case of indicating a score to the question and the sub-questions, it will be added to the total. Therefore, it is advisable to only indicate the score in one level.

The following example asks a first question, with no sub-questions, with a score of two points and a second question with two sub-questions with a score of 2 points each, which will show that the second question is worth a total of four points in the scorecard.

```
#import "@preview/g-exam:0.3.0": *
#show: g-exam.with()

#g-question(points: 2)[List prime numbers]
#v(1fr)

#g-question[Complete the following sentences]
  #g-subquestion(points: 2)[Don Quixote was written by ...]
  #v(1fr)

  #g-subquestion(points: 2)[The name of the continent we live on is ...]
  #v(1fr)
```

3.5 Information in the document's metadata

If a pdf document is generated, the information will be saved in the document. Such as the author's name, e-mail, watermark, exam information, ...

```
#show: g-exam.with(
  author: (
    name: "Peter Andreas Hansen",
    email: "matheschool@outlook.es",
    watermark: "Teacher: Peter",  ),
  school: (
    name: "Sunrise Secondary School",
    logo: read("./logo.png", encoding: none),
  ),
  exam-info: (
    academic-period: "Academic year 2023/2024",
    academic-level: "1st Secondary Education",
    academic-subject: "Mathematics",
    number: "2nd Assessment 1st Exam",
    content: "Radicals and fractions",
    model: "Model A"
  ),
```

This information can be consulted in the properties of the pdf document.

3.6 Punctuation Decimal Separator

Depending on the language we use, the decimal separator may change. To specify the decimal separator we want to use, we use 'decimal-separator' with the values '.' or ',' as follows.

```
#show: g-exam.with(
  decimal-separator: ",",
)
```

3.7 Font type

For children with special needs, it is recommended to use a larger font, which can cause the entire document to be out of place. To do this, the `question-text-parameters` parameter has been created in which we will indicate the font that will have, only, the content of the questions, leaving the rest of the text with the same font. In this way, the layout of the document will be maintained in a similar way.

The following example will use a 16-point, double-spaced font for the questions.

```
#show: g-exam.with(
  question-text-parameters: (size: 16pt, spacing:200%),
)
```

3.8 Languages

You can specify the language in which you want the text to appear. To do this, we use the 'languaje' property. It can take the values 'en', 'es', 'de', 'fr', 'pt', 'it'.

```
#show: g-exam.with(
  languaje: "es",
)
```

4 Commands

4.1 Exam

```
/// User g-exam template
#show: g-exam.with()
```

4.1.1 exam

Template for creating an exam.

- author: Infomation of author of exam.
- name (string, content): Name of author of exam.
- email (string): E-mail of author of exam.
- watermark (string): Watermark with information about the author of the document.
- school: Information of school.
- name (string, content): Name of the school or institution generating the exam.
- logo (none, content, bytes): Logo of the school or institution generating the exam.
- exam-info: Information of exam.
- academic-period (none, content, str): Academic period.
- academic-level (none, content, str): Academic level.
- academic-subject (none, content, str): Academic subname.
- number (none, content, str): Number of exam.
- content (none, content, str): Content of exam.
- model (none, content, str): Model of exam.
- date (none, auto, datetime): Date of generate document.
- keywords (string): Keywords of document.
- language (en, es, de, fr, pt, it, nl): Language of document. English, Spanish, German, French, Portuguese and Italian are defined.
- clarifications (string, content, array): Clarifications of exam. It will appear in a box on the first page.
- question-text-parameters: Parameter of text in question and subquestion. For example, it allows us to change the text size of the questions.
- show-student-data (none, true, false, “first-page”, “all-pages”, “odd-pages”): Show a box for the student to enter their details. It can appear on the first page, all pages or on all odd-numbered pages.
- show-grade-table: (bool): Show the grade table.
- decimal-separator: (“.”, “,”): Indicate the decimal separation character.
- question-points-position: (none, left, right): Position of question points.
- show-solution: (true, false, “space”, “spacex2”, “spacex3”): Show the solutions.
- show-draft: (true, false): It shows a draft label in the background.

Parameters

```
exam(
  author,
  school,
  exam-info,
  language,
  localization,
  date,
  keywords,
  clarifications,
  question-text-parameters,
  show-student-data,
  // show-student-data,
  show-grade-table,
  decimal-separator,
  question-points-position,
  show-solution,
  show-draft,
  body
)
```

The `exam` library has the `question`, `subquestion`, `solution` and `clarification` commands to create questions, subquestions, solutions, and clarifications.

4.2 Questions and subquestions

4.2.1 question

Show a question.

Example:

```
#question(points:2)[This is a question]
```

Parameters

```
question(
  points: none float,
  points-position: none left right,
  body: string content
)
```

points `none` or `float`

Points of the question.

Default: `none`

points-position `none` or `left` or `right`

Position of points. If none, use the position defined in G-Exam.

Default: `none`

body `string` or `content`

Body of question.

4.2.2 subquestion

Show a sub-question.

Example:

```
#subquestion(points:2)[This is a sub-question]
```

Parameters

```
subquestion(
  points: none float,
  points-position: none left right,
  body: string content
)
```

points `none` or `float`

Points of the sub-question.

Default: `none`

points-position `none` or `left` or `right`

Position of points. If none, use the position defined in G-Exam.

Default: `none`

body `string` or `content`

Body of sub-question.

4.3 Solutions

4.3.1 solution

Show solution of question.

Example:

```
#solution(
   alternative-content: v(1fr)
 )[
 I know the demostration, but there's no room on the margin. For any clarification ask
Andrew Whilst.
]
```

Parameters

```
solution(
  alternative-content: string content,
  show-solution,
  body: string content
)
```

alternative-content `string` or `content`

Alternate content when the question solution is not displayed.
- show-solution: (true, false, “space”, “spacex2”, “spacex3”): Show the solutions.

Default: `none`

body `string` or `content`

Body of question solution

4.4 Clarifications

4.4.1 clarification

Show a clarification.
- size(length): Size of clarification.
- body(string, content): Body of clarification.

Parameters

```
clarification(
  size,
  body
)
```