Stage 2 Digital Technologies

Collaborative Project

*Spectator Reporting*

Purpose

Apply your learning about iterative project development to create a digital solution through a collaborative project, providing evidence of your individual contributions.

Assessment description

For this task, you will use the analysed data from the Project Skills Task 2 and work completed in Project Skills Task 3 to create a website or app for schools or sporting clubs. The website or app will allow a person to enter information regarding spectators who are behaving inappropriately at a children’s sporting fixture.

You will work in a group to create your solution, where each member of the group will contribute to specific sections of the project.

You will present your solution to the potential client or clients, explaining your digital solution and project evaluation.

Each member of the group will need to explain their role in, and contribution to the project, supported by evidence.

Following these steps will help to make sure you cover all relevant aspects:

1. Identify the project client or clients (stakeholders)
2. Define a design specification that covers the different aspects of the solution
3. Deconstruct the problem and create a preliminary design for the digital solution and identify roles and activities for group members
4. Develop and agree on a plan based on time-scale and resources, communication strategies to be used, and key features of the project deliverables
5. Develop detailed designs for each feature
6. Develop each feature
7. Each feature must be tested to ensure it is usable and before moving onto the next one
8. Collaborate regularly to clarify, amend and add features based on your progress.

You must show evidence of how each group member has contributed to the overall project. You will need to show evidence of the following:

* how your group has assigned tasks to each member
* discussions of features including clarifying points and amending and adding features based on these discussions
* discussions of what each member has performed.

Assessment conditions

You will have 6 weeks to complete this project.

You will need to present your solution as a group, with each group member speaking for a maximum of 5 minutes, including:

* a description of your product brief
* flowchart, pseudocode or similar, to show how you have broken down the problem
* project management milestones and group allocations
* a validation which shows how your solution works, how effective your solution is, and highlights any innovative features
* evaluation of the effectiveness of the final design.

Assessment design criteria

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| Computational Thinking  CT1 Application of computational thinking concepts and techniques to identify and deconstruct problems of interest.  CT2 Use of abstraction to identify core concepts and ideas.  CT4 Application of skills and processes to develop solutions to problems of interest.  Development and Evaluation  DE1 Design and creation of digital solutions or a prototype.  DE3 Evaluation of the effectiveness of a digital solution or prototype.  DE4 Explanation, with supporting evidence, of own role in and contribution to projects. |

Performance standards

| - | Computational Thinking | Development and Evaluation | Research and Ethics |
| --- | --- | --- | --- |
| A | Astute and creative application of computational thinking concepts and techniques to clearly identify and deconstruct problems of interest.  Insightful use of abstraction to identify core concepts and ideas.  In-depth analysis of relationships in data sets to draw insightful conclusions and make well-justified predictions.  Highly purposeful application of skills and processes to develop highly efficient and logical solutions to complex problems of interest. | Clear and consistent use of initiative in the design and creation of digital solution or prototype that includes innovative features.  Highly purposeful and strategic application of iterative development, testing, modification, and documentation of an innovative digital solution or prototype.  Insightful evaluation of the effectiveness of a digital solution or prototype.  Insightful explanation, supported by clear and highly convincing evidence of own role in and contribution to projects. | In-depth research and discussion of the ethical considerations in digital technologies. |
| B | Well-considered application of computational thinking concepts and techniques to identify and deconstruct problems of interest.  Some insights in the use of abstraction to identify core concepts and ideas.  Some depth in analysis of relationships in data sets to draw informed conclusions and make justified predictions.  Purposeful application of skills and processes to develop efficient and mostly logical solutions to some complex problems of interest. | Mostly consistent use of initiative in the design and creation of digital solution or prototype that includes one or more innovative features.  Mostly purposeful application of iterative development, testing, modification, and documentation of a digital solution or prototype, with some innovation.  Well-considered evaluation of the effectiveness of a digital solution or prototype.  Some depth in explanation, supported by clear and mostly convincing evidence of own role in and contribution to projects. | Some depth in research and discussion of the ethical considerations in digital technologies. |
| C | Application of computational thinking concepts and techniques to identify and deconstruct problems of interest.  Some use of abstraction to identify core concepts and ideas.  Description, with some analysis, of relationships in data sets to draw generally informed conclusions and make predictions, with some justification.  Application of skills and processes to develop generally efficient and logical solutions to problems of interest. | Some use of initiative in the design and creation of digital solution or prototype, which may include one or more innovative features.  Competent application of iterative development, testing, modification, and documentation of a digital solution or prototype, with one or more innovative features.  Description of the effectiveness of a digital solution or prototype, with evaluation of some features.  Explanation, supported by generally clear evidence, of own role in and contribution to projects. | Considered research and discussion of the ethical considerations in digital technologies. |
| D | Partial application of basic computational thinking concepts and techniques to identify and describe problems of interest.  Identification and description of some basic core concepts and/or ideas.  Identification and use of one or more simple relationships in data sets to draw a partial conclusion and/or make a prediction based on limited evidence.  Partial application of skills and processes to develop solutions to simple problems of interest. | Partial design and creation of digital solution or prototype.  Basic application of some iterative development, testing, modification, and/or documentation of a digital solution or prototype.  Partial description of the effectiveness of a digital solution or prototype.  Basic explanation of own role in and/or contribution to projects, with limited supporting evidence. | Basic research and discussion of one or more ethical considerations in digital technologies. |
| E | Attempted application of a limited number of basic computational thinking concepts or techniques to describe a problem of interest.  Attempted identification and description of a core concept or idea.  Attempted use of limited, simple data sets to draw a conclusion or make a prediction.  Attempted application of skills and processes to develop partial solutions to some simple problems of interest. | Attempted design and creation of digital solution or prototype.  Attempted application of simple iterative development, testing, modification, or documentation of a digital solution or prototype.  Limited description of a digital solution or prototype.  Limited description of own participation in projects. | Attempted research and discussion of ethical considerations in digital technologies. |