**Set Task Brief**

The software development company that you work for has secured a new contract to develop a digital solution for **ByteLearn Academy**.

ByteLearn Academy is an online education provider that currently offers customers:

* Virtual tutoring sessions
* Study resources and interactive learning tools
* Exam preparation and revision support

The client (the owner of ByteLearn Academy) would like to develop a digital solution that will:

* Provide students with engaging educational content and revision tools
* Offer access to digital study materials tailored to different learning styles
* Encourage existing students to explore additional courses and services provided by ByteLearn Academy

The client has carried out market research to identify potential features that their existing students suggested could be included in the digital solution. The potential features identified are:

* Free and premium (paid-for) content
* Accessibility features for students with learning difficulties
* Social learning features, such as discussion forums or peer support groups
* AI-driven personalized study plans and progress tracking

**Activities**

**Activity A (i)**

In preparation for developing a proposal for the digital solution, you have been asked to carry out research. Your research should consider how digital solutions are used to meet the needs of different users within the EdTech (education technology) industry, including:

* How hardware and software are used within the context of digital education
* Newly emerging technologies in online learning
* How digital solutions can be designed to support different learning needs and user preferences
* The industry-specific guidelines and regulations you would be required to follow

You are permitted to carry out research outside of supervised assessment time. Any notes about your research that you wish to take into the supervised assessment may contain only facts and figures related to the research carried out and must be submitted as an appendix to the task.

**Activity A (ii)**

Produce a detailed proposal for a digital solution you would develop to meet the needs of:

* The client (ByteLearn Academy)
* Existing and potential students

Your proposal should provide a rationale for the solution you are proposing and include:

* **The business context**
* **The functional and non-functional requirements** of the solution
* **Decomposition of the problems** that will need to be solved to implement the functional and non-functional requirements
* **The key performance indicators (KPIs) and user acceptance criteria** for the proposed solution
* **A description of the proposed solution**
* **Justification of:**
  + How the recommended solution meets the needs of the client and users
  + How potential risks will be mitigated
  + How relevant regulatory guidelines and legal requirements, in relation to software development and the education industry, will be addressed

**Activity B**

Produce a set of **design documents** for the digital solution that you are proposing. The design documentation must include:

* **Visual/interface designs**
* **Data requirements**
* **A selection of algorithm designs** (maximum of five)
* **A test strategy**

Your proposed solution must be of sufficient scope and complexity to demonstrate the ability to implement code in at least two appropriate languages to handle both **front-end and back-end processes**.

Your design documents should be of sufficient detail to:

* Effectively communicate the intended solution to both **technical and non-technical stakeholders**
* Allow the **client to make informed decisions**
* Allow a **third-party developer** to use the design documents to create the proposed solution

Your **algorithm designs** do not need to show the whole solution but should demonstrate how you would solve a number of different key problems. You should **limit your algorithm designs to a maximum of five complex problems**.

Your **test strategy** does not need to detail specific tests for every part of the solution but should provide a selection of tests relevant to your proposed solution, showing:

* The **order in which you intend to test all components** of the solution
* The **types of tests** to be carried out for each of the components